

Digital Palmcorder®

Panasonic®

Digital Video Camcorder
Operating Instructions

Models No. **PV-DV351**
PV-DV701



[PV-DV701 shown]

MultiMediaCard™



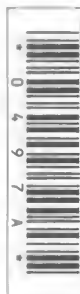
Mini **DV**

Before attempting to connect, operate or adjust this product, please read these instructions thoroughly.

Spanish Quick Use Guide is included.

Guía para rápida consulta en español está incluida.

**For assistance, please call : 1-800-211-PANA(7262) or
send e-mail to : consumerproducts@panasonic.com**



LSQT0497A

Things You Should Know

Thank you for choosing Panasonic!

You have purchased one of the most sophisticated and reliable products on the market today. Used properly, we're sure it will bring you and your family years of enjoyment. Please take time to fill in the information below. The serial number is on the tag located on the underside of your Palmcorder. Be sure to retain this manual as your convenient Palmcorder information source.

Date of Purchase _____

Dealer Purchased From _____

Dealer Address _____

Dealer Phone No. _____

Model No _____

Serial No _____

Safety Precautions

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

Your MiniDV Palmcorder is designed to record and play back in Standard Play (SP) mode and Long (LP) mode.

It is recommended that only cassette tapes that have been tested and inspected for use in VCR machines with the MiniDV mark be used.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

The above markings are located on the appliance bottom cover.

Declaration of Conformity

Model Number PV-DV351/PV-DV701
Trade Name Panasonic
Responsibility Party Matsushita Electric Corporation of America
Address One Panasonic Way Secaucus New Jersey 07094
Telephone Number 1-800-211-PANA(7262)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note This equipment has been tested and found to comply with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.

If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, 'Something About Interference' available from FCC local regional offices helpful.

FCC Warning: To assure continued FCC compliance, use only the provided shielded interface cable when connecting digital video camera to computer in accordance with instruction herein. Also, any unauthorized changes or modifications to this equipment would void the user's authority to operate.

Important Safeguards

- 1 Read Instructions — All the safety and operating instructions should be read before the unit is operated
- 2 Retain Instructions — The safety and operating instructions should be retained for future reference
- 3 Heed Warnings — All warnings on the unit and in the operating instructions should be adhered to
- 4 Follow Instructions — All operating and maintenance instructions should be followed
- 5 Cleaning — Unplug this video unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning.
- 6 Attachments — Do not use attachments not recommended by the video product manufacturer as they may be hazardous
- 7 Water and Moisture — Do not use this video unit near water — for example near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like
- 8 Accessories — Do not place this video unit on an unstable cart, stand, tripod, bracket, or table. The video unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video unit. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn
- 9 Ventilation — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video unit and to protect it from overheating. These openings must not be blocked or covered. Never place the video unit on a bed, sofa, rug, or other similar surface or near or over a radiator or heat register. This video unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to
- 10 Power Sources — This video unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video units intended to be operated from battery power, or other sources, refer to the operating instructions

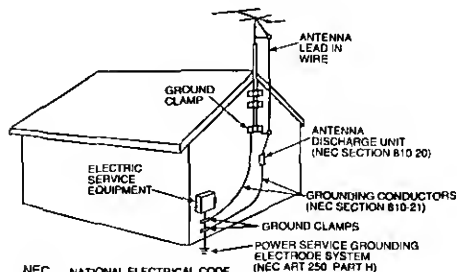


- 11 Grounding or Polarization — This video unit may be equipped with either a polarized 2-wire AC (Alternating Current) line plug (a plug having one blade wider than the other) or 3-wire grounding type plug, a plug having a third (grounding) pin

The 2-wire polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

The 3 wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

- 12 Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords of plugs, convenience receptacles, and the point where they exit from the unit
- 13 Outdoor Antenna Grounding — If an outside antenna or cable system is connected to the video unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Part 1 of the Canadian Electrical Code, in USA Section 810 of the National Electrical Code, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.



- 14 Lightning — For added protection of this video unit receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video unit due to lightning and power-line surges.

Important Safeguards

- 15 **Power Lines** — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 16 **Overloading** — Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 17 **Objects and Liquids** — Never push objects of any kind into this video unit through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind onto the video unit.
- 18 **Servicing** — Do not attempt to service this video unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 19 **Damage Requiring Service** — Unplug this video unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If any liquid has been spilled into, or objects have fallen onto, the video unit.
 - c. If the video unit has been exposed to rain or water.
 - d. If the video unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video unit to its normal operation.
 - e. If the video unit has been dropped or the cabinet has been damaged.
 - f. When the video unit exhibits a distinct change in performance — this indicates a need for service.
- 20 **Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 21 **Safety Check** — Upon completion of any service or repairs to this video unit, ask the service technician to perform safety checks to determine that the video unit is in safe operating order.

Precautions

USE & LOCATION

- **TO AVOID SHOCK HAZARD** Your Palmcorder and power supply should not be exposed to rain or moisture. Do not connect the power supply or operate your Palmcorder if it gets wet. Your Palmcorder has been designed for outdoor use, however it is not designed to sustain direct exposure to water, rain, sleet, snow, sand, dust, or direct splashing from a pool or even a cup of coffee. This action could permanently damage the internal parts of your Palmcorder. Do not attempt to disassemble this unit. There are no user serviceable parts inside. Unplug your Palmcorder from the power supply before cleaning.
- **DO NOT AIM YOUR PALMCORDER AT THE SUN OR OTHER BRIGHT OBJECTS**
- **DO NOT LEAVE THE PALMCORDER WITH THE EVF AIMED DIRECTLY AT THE SUN AS THIS MAY CAUSE DAMAGE TO THE INTERNAL PARTS OF THE EVF**
- **DO NOT EXPOSE YOUR PALMCORDER TO EXTENDED HIGH TEMPERATURE** Such as direct sunlight, inside a closed car, next to a heater, etc. This action could permanently damage the internal parts of your Palmcorder.
- **AVOID SUDDEN CHANGES IN TEMPERATURE** If the unit is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the unit.
- **DO NOT LEAVE YOUR PALMCORDER OR THE POWER SUPPLY TURNED ON WHEN NOT IN USE**
- **STORAGE OF YOUR PALMCORDER** Store and handle your Palmcorder in a manner that will not subject it to unnecessary movement (avoid shaking and sinking). Your Palmcorder contains a sensitive pick-up device which could be damaged by improper handling or storage.

CARE

- **TO CLEAN YOUR PALMCORDER** Do not use strong or abrasive detergents when cleaning your Palmcorder body.
- **TO PROTECT THE LENS** Do not touch the surface of the lens with your hand. Use a commercial Palmcorder lens solution and lens paper when cleaning the lens. Improper cleaning can scratch the lens coating.
- **TO PROTECT THE FINISH OF YOUR PALMCORDER** Before handling your Palmcorder, make sure your hands and face are free from any chemical products, such as suntan lotion, as it may damage the finish.

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Before Using

This Operating Instructions book is designed for use with models **PV-DV351** and **PV-DV701**. The **PV-DV701** is the model used for illustrative purposes. Features may vary, so please read carefully.

Differences between models

Model Number	PV-DV351	PV-DV701
LCD Monitor	2.5 inch (63.5 mm) Liquid Crystal Display	3.5 inch (88.9 mm) Liquid Crystal Display
A/V Input	NO	YES
S-VIDEO Input	NO	YES
Remote Control	Optional	Supplied

Unpack your Palmcorder

1 pc AC Adaptor (PV-DAC11) with AC Cable and DC Cable



1 pc Lens Cap (LSYF0518) with Lens Cap Strap (LSGQ0046)



1 pc IR Remote Control (LSSQ0294) with Battery (CR2025) [PV-DV701 only]



1 pc 8 MB Memory Card (LSFT0198A) or (LSFT0262)



1 pc USB Cable (LSJA0354)



1 pc Battery Pack (PV-DBP8A)



1 pc Shoulder Strap (LSFC0016)



1 pc A/V Cable (LSJA0280)



1 pc Color Enhancement Light (VYKW3130) with Light Holder



1 pc CD-ROM of Driver Software for Windows 98/Me/2000, USB Device Driver for Windows 98/Me/2000, CARD LINK (for USB) for Windows 98/Me/2000, PHOTOVU LINK/Movie Messenger for Windows 98/Me/2000, ArcSoft Software for Windows 95/98/Me/2000 (LSFT0283)



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Intel® Pentium® is a registered trademark.

CARD LINK is a trademark.


PHOTOVU LINK/Movie Messenger is a registered trademark.

IBM is a registered trademark of IBM Company.

MultiMediaCard is a registered trademark.

SD is a trademark.

Record Speed/Playback Time

Use only those tapes having the  logo indicating the 6.35 mm digital standard.

Cassette type	Record Speed/Playback time	
	SP	LP
AY-DVM30EA	30 minutes	45 minutes
AY-DVM60EA	60 minutes	90 minutes
AY-DVM80EA	80 minutes	120 minutes

Erase Protection

Cassettes have a sliding record tab to ensure recordings are not accidentally erased.

1

To prevent accidental erasure

Slide the tab to the left (open)

record tab



2

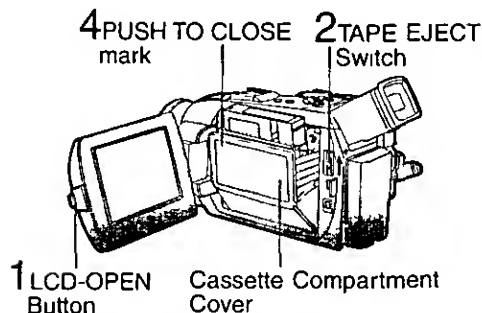
To record again

Slide the tab to the right (close)



Easy Cassette Eject/Insertion

- If the Palmcorder is connected to a power source, the cassette can be inserted and ejected without turning the Palmcorder on



Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)

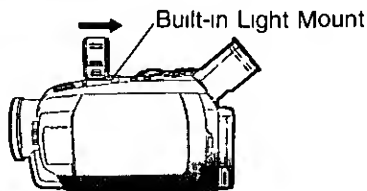
- Press **LCD-OPEN** to unlock the LCD monitor, and **swing it fully open**
 - Slide **TAPE EJECT** to open the Cassette Compartment Cover
 - Insert a cassette record tab up, window side facing out
 - Press **PUSH TO CLOSE** mark to close the Cassette Compartment Cover
- To remove the cassette...**
Slide **TAPE EJECT** to open the Cassette Compartment Cover and pull the cassette tape straight out

Note

- When inserting the cassette, make sure it faces in the right direction and then push in completely

Using the Light

To brighten the natural colors in a scene



Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set **POWER** to **CAMERA** or **M-CARD**

- Slide **Light** into the **Built-in Light Mount**
Be sure it locks into place
- Press **LIGHT** to turn **ON** or **OFF**.

2 **LIGHT** Button



Note

- Using **Light** reduces battery operating time
- Be sure to provide adequate ventilation if using **Light** in a hot environment for an extended period
- Be sure **LIGHT** is set to **OFF** when not in use
- Do not attempt to lift or carry the Palmcorder by holding the **Enhancement Light**
- If light bulb needs to be replaced, take **Light** to your nearest authorized **Servicenter**

To remove the Light

Press **RELEASE** and slide the **Light** out of the mount

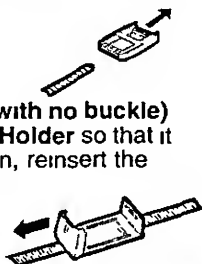
Caution

This light becomes hot during operation
Make sure nothing covers the **Light** during operation

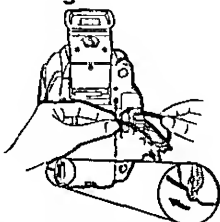
Before Using

Attaching the Shoulder Strap

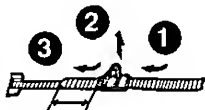
- 1 Undo the two strap ends from their buckles
- 2 Remove the buckle from one end of the strap
- 3 Thread the strap (with no buckle) through the Light Holder so that it faces outward. Then, reinsert the buckle



- 4 Thread the strap ends through the Strap Attachment Rings

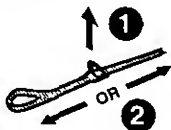


- 5 Reinsert the strap ends through their buckles
 - Make sure the straps are not twisted



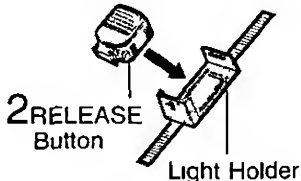
Adjust the Length

- 1 Loosen the strap from the Buckle and create a loop
- 2 Pull the strap firmly through the Buckle to shorten or lengthen the strap



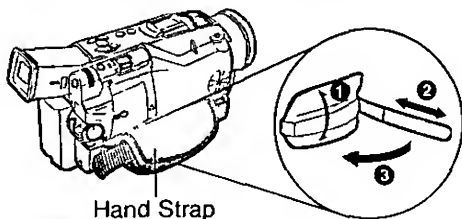
Attach the Light

- 1 Insert the Light into the Light Holder for Storage
- 2 To remove the Light, press **RELEASE** and slide Light out of the holder



Hand Strap

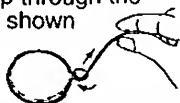
Adjust the length of the Hand Strap to the size of your hand as illustrated



Lens Cap

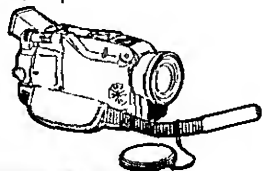
Attaching the Lens Cap Strap

Thread the Lens Cap Strap through the Strap Attachment Ring as shown



Attaching the Lens Cap Cord to the Hand Strap

Remove the Hand Strap from the front clasp and thread the Strap through the loop in the Lens Cap Cord. Reattach the Hand Strap



Insert the Battery Pack

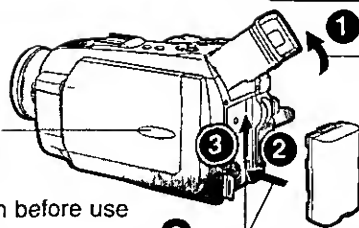
Before you begin

- Charge the Battery (See page 11)

Protection Film

Note

- Remove the Protection Film before use



1 Tilt Viewfinder upward

2 Insert the Battery Pack and slide it up until it locks with a click

Insert Cassette

These Palmcorders are equipped with the Easy Cassette Eject System so it is easy to insert or remove tapes, even when on a tripod (See page 7)

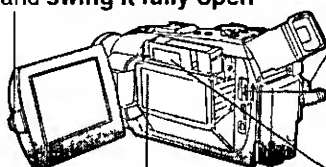
1 Press LCD-OPEN to unlock the LCD monitor, and swing it fully open

2 Set POWER Switch to VCR or CAMERA

3 Slide TAPE EJECT Switch to open the Cassette Compartment Cover

5 Press PUSH TO CLOSE mark to close the Cassette Compartment Cover

4 Insert a cassette record tab up, window side facing out
• Make sure the record tab is closed (See page 6)



Camera Recording

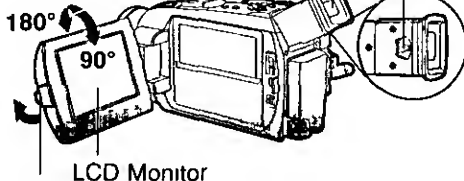
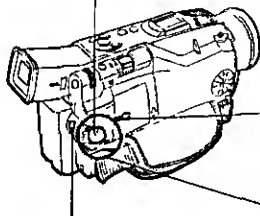
When the LCD monitor is fully open, the Viewfinder automatically turns OFF

1 Set POWER Switch to CAMERA

2 Adjust the Vision Adjustment Control to your eyesight.

4 Press REC/PAUSE Button to start recording
Press REC/PAUSE Button again to pause recording

3 Press LCD-OPEN Button to unlock the LCD monitor. Swing it fully open and adjust the angle



Quick Guide

Insert Memory Card*

Before you begin

- Charge the Battery (See page 11)

*Memory Card MultiMediaCard or SD Memory Card (See page 67)

- Be sure to insert the Memory Card before using the Card PhotoShot (See page 32)

Below is a list of memory cards which can be used in this Palmcorder

Memory Card	Capacity
Memory Card (LSFT0198A) or (LSFT0262) (supplied)	8 MB
MultiMediaCard (SanDisk brand)	8 MB, 16 MB
SD Memory Card (optional) (See page 66)	16 MB, 32 MB, 64 MB

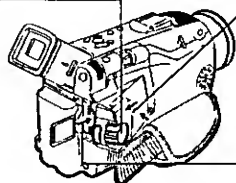
SD Memory Card write protection switch



A write protection switch is located on the SD Memory Card. Sliding the switch to the "LOCK" position prevents writing on or formatting the card.

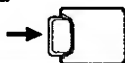
Write protection Switch

- 1 Set POWER Switch to OFF**
- 2 Push and Slide M-CARD EJECT Button to open M-CARD door**
- 3 Insert the Memory Card and hold in place until you hear a click**
- 4 Close the M-CARD Door**



To remove the Memory Card

Press here to eject the card →



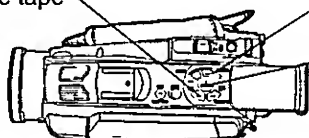
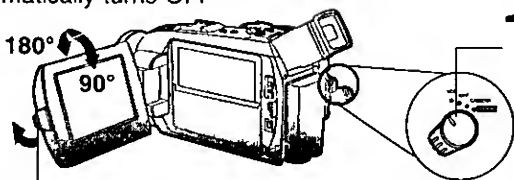
To Watch Playback in the LCD (Liquid Crystal Display)

When the LCD monitor is fully open, the Viewfinder automatically turns OFF

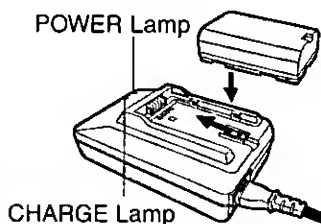
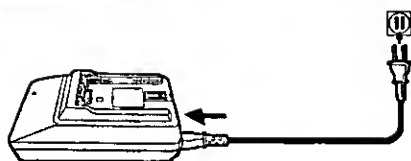
Before you begin

- Charge the Battery (See page 11)

- 1 Set POWER Switch to VCR**
- 2 Press LCD-OPEN Button to unlock the LCD monitor. Swing it fully open and adjust the angle**
- 3 Press ◀ (REW) Button to rewind the tape**
- 4 Press ▶ (PLAY) Button to start playback**
- 5 Press ■ (STOP) Button to stop playback**



Charge the Battery Pack on the AC Adaptor



1 Connect and plug in the Power Cord as shown

- POWER Lamp will light
- Remove the DC Cable, if attached, from the adaptor

2 Attach the Battery as shown to charge

- CHARGE Lamp lights up. It goes out when charging is complete (approx 1 hour). Expect approx 1 hour 30 minutes of operation (EVF usage) when fully charged

3 Remove the Battery
Slide the Battery out and then lift up

Note

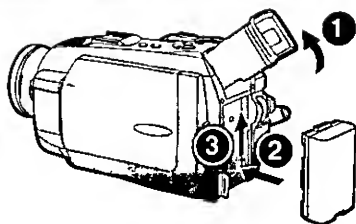
About the Flashing of the CHARGE Lamp

- Charge the Battery within an ambient temperature range of 10 °C and 30 °C
- If charging is done in extreme low or high temperatures, Battery charge time increases

CHARGE Lamp flashes when

- The Battery is being charged, but charging is taking longer than normal
- Charging is not possible. Remove the Battery once, wait a short time, then re-attach it for charging

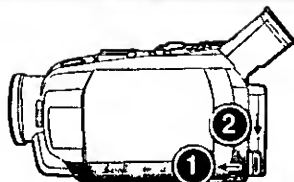
Insert the Battery Pack



1 Tilt Viewfinder upward

2 Insert the Battery Pack and slide it up until it locks with a click

Remove the Battery Pack



BATT RELEASE Switch

To remove the Battery Pack

Slide the Battery downward while sliding the BATT RELEASE Switch

Supplying Power

Battery Care

Caution:

- Charge only with specified charger.
- Charge the Battery within an ambient temperature range of 32° F (0° C) and 104° F (40° C).
- The Battery may be warm after charging or just after use. This is normal.
- Do not use an insufficiently charged or worn out Battery.
- If charging is done in extreme low or high temperatures, Battery charge time increases.

Safety precautions:

- Do not place the Battery near, or dispose of in fire.
- Do not directly connect (short circuit) the positive (+) and negative (-) terminals.
- Never attempt to disassemble or reassemble the Battery.

To avoid damage to the Battery:

- Do not drop or jar the Battery.
- Use the Battery with specified models only.
- If the Battery is used in extremely high temperatures, a safety device will automatically prevent operation.

To insure longer battery life:

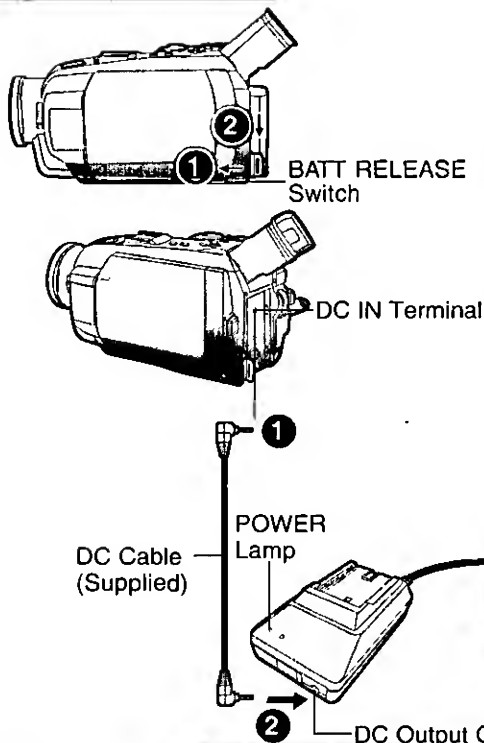
- While not in use, remove Battery from the Palmcorder and AC Adaptor and store in a cool, dark, dry place. If you leave the Battery in the Palmcorder or on the AC Adaptor, the Battery will no longer be rechargeable.
- Keep the Battery terminals clean.

U.S.A. CONSUMERS: ATTENTION:



A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

Use AC Adaptor



1 Slide the Battery downward while sliding the BATT RELEASE Switch to remove the Battery Pack. (See page 11.)

2 Insert the DC Cable into the DC IN Terminal.

3 Connect the other end of the DC Cable to the AC Adaptor as shown.

4 Plug in the AC Adaptor.
• The POWER Lamp on the AC Adaptor lights up.

Note

- When not in use, unplug the AC Adaptor from the AC outlet. (AC Adaptor consumes 1 W of electric power when plugged into an AC outlet even when not in use.)

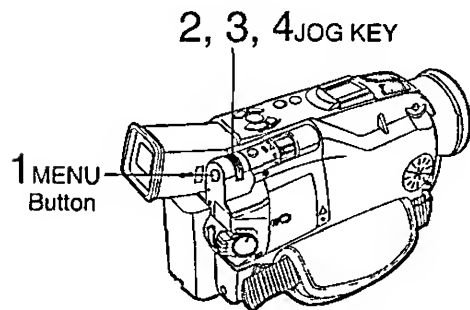
Setting the Clock

Set the Date and Time

The date and time is calculated, including leap year, up to DEC 31 2089

Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to CAMERA or VCR



EXAMPLE

YEAR	2001	
↓		Push
MONTH	JAN	
↓		Rotate
MONTH	FEB	

Note

- To make corrections, Press JOG KEY repeatedly to move back to an item and correct
- A built-in Battery maintains clock operation. If the Palmcorder is not connected to a power source for a few months, the built-in battery may discharge and "CLOCK BATTERY" indication appears (See page 21)

- 1 Press MENU to display the Camera or VCR mode menu screen (See page 14)

[CAMERA MENU]

CAMERA MENU	
1 FUNCTION	
2 ADJUST	
3 REC MODE	
4 SET UP	
5 DISPLAY SETTING	
6 LCD/EVF SETTING	
7 PHOTO TITLE	
SELECT ROTATE JOG KEY	
SET	PUSH JOG KEY
EXIT	PUSH MENU KEY

[VCR MENU]

VCR MENU	
1 FUNCTION	
2 REC MODE	
3 PLAY MODE	
4 MULTI SETTING	
5 DISPLAY SETTING	
6 LCD/EVF SETTING	
SELECT ROTATE JOG KEY	
SET	PUSH JOG KEY
EXIT	PUSH MENU KEY

- 2 Rotate JOG KEY to select **DISPLAY SETTING**, and then press JOG KEY to display the DISPLAY SETTING menu screen
- 3 Rotate JOG KEY to select **CLOCK SET**, and then press JOG KEY to set to ON (See pages 16, 18)
 - The DATE/TIME SETTING menu is displayed
- 4 Rotate JOG KEY to select YEAR, then press JOG KEY to fix and move to the next item. Likewise, set the month, day, hour, and minutes

DATE/TIME SETTING	
YEAR	2001
MONTH	OCT
DAY	12
HOUR	8PM
MINUTE	10
SELECT PUSH JOG KEY	
SET	ROTATE JOG KEY
EXIT	PUSH MENU KEY

When DATE/TIME setting is completed, press MENU three times to start the clock and exit

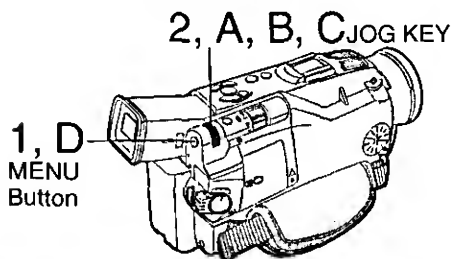
Using the Palmcorder Menu

The Palmcorder features three menu displays: one for CAMERA mode (recording), one for M-CARD (Memory Card Photo Mode) and one for VCR mode (Playback). (See pages 15-18.)

- While the Menu screen is displayed, you cannot record on or play a tape.
- While recording, the Menu screen cannot be displayed.
- During playback, the Menu screen can be displayed.

Before you begin

- Connect the Palmcorder to a power source. (See pages 11, 12.)
- Set POWER to CAMERA or VCR.



Displaying the MENU

- 1** Press **MENU** to display the CAMERA or VCR menu (according to the POWER setting).
- 2** Rotate **JOG KEY** to select a menu item.

Setting the MENU Items (EX. VCR Mode menu)

- A** Press **JOG KEY** to set your selection.
- B** Rotate **JOG KEY** to select a menu item.
- C** Press **JOG KEY** to set your selection.
 - The "●" mark indicates selection.
- D** Press **MENU** twice to exit the menu.

VCR PLAY FUNCTION	
FUNCTION	OFF ● WINDON STROBE
MORALIC SLIM TRAIL	STRETCH
EFFECT	OFF ● SPILL MONO
DUB	OFF ● ON
SELECT: ROTATE JOG KEY	
EXIT: PUSH JOG KEY	
EXIT: PUSH MENU KEY	

VCR PLAY FUNCTION	
FUNCTION	OFF ● WINDON STROBE
MORALIC SLIM TRAIL	STRETCH
EFFECT	OFF ● SPILL MONO
DUB	OFF ● ON
SELECT: ROTATE JOG KEY	
EXIT: PUSH JOG KEY	
EXIT: PUSH MENU KEY	

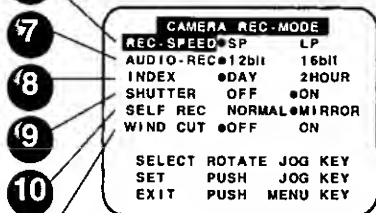
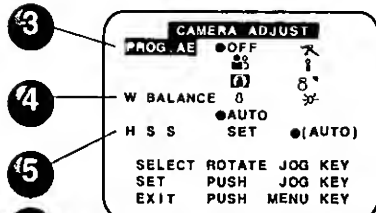
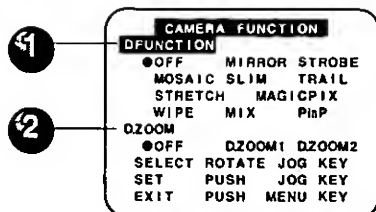
CAMERA Main menu

- 1: D. FUNCTION**
CAMERA FUNCTION menu is displayed. To select D.FUNCTION or D.ZOOM.
- 2: ADJUST**
CAMERA ADJUST menu is displayed. To select PROG. AE, W. BALANCE, or H.S.S. (High Speed Shutter).
- 3: REC MODE**
CAMERA REC-MODE menu is displayed. To select REC-SPEED, AUDIO-REC, INDEX, SHUTTER, SELF-REC, or WIND-CUT.
- 4: SET-UP**
CAMERA SET-UP menu is displayed. To select REMOTE, BEEP, or MAGICVU.
- 5: DISPLAY SETTING**
DISPLAY SETTING menu is displayed. To select DISPLAY, C.RESET, DATE/TIME, or CLOCK-SET.
- 6: LCD/EVF SETTING**
LCD/EVF SETTING menu is displayed. To select LCD BRIGHTNESS, LCD COLOR or EVF BRIGHTNESS.
- 7: PHOTO TITLE**
PHOTO TITLE menu is displayed. To select TITLE or MODE.

VCR Main menu

- 1: PLAY FUNCTION**
VCR PLAY FUNCTION menu is displayed. To select D. FUNCTION, D.EFFECT, or D.ZOOM.
- 2: REC MODE**
VCR REC MODE menu is displayed. To select REC-SPEED, AUDIO-DUB, AUDIO-REC (PV-DV701 only), or AV-JACK (PV-DV701 only).
- 3: PLAY MODE**
VCR PLAY MODE menu is displayed. To select INDEX, AUDIO, REMOTE, or B.SEARCH.
- 4: MULTI SETTING**
MULTI SETTING menu is displayed. To select SPEED.
- 5: DISPLAY SETTING**
DISPLAY SETTING menu is displayed. To select DISPLAY, C.RESET, DATE/TIME, or CLOCK-SET.
- 6: LCD/EVF SETTING**
LCD/EVF SETTING menu is displayed. To select LCD BRIGHTNESS, LCD COLOR or EVF BRIGHTNESS.

Camera Mode Menu Screen



1 DIGITAL FUNCTION

(See pages 43, 45)

To select one of the 10 digital functions

Setting to OFF cancels the previously selected digital function

2 D ZOOM (See page 40)

To select D ZOOM1 (from 10X to 25X) or D ZOOM2 (from 10X to 500X)

Setting to OFF cancels the previously selected digital zoom

3 PROG AE (See page 44)

To select one of the 5 Program AE modes. Setting to OFF cancels the previously selected Program AE mode

4 W BALANCE (See page 42)

To select one of the 3 White Balance modes

5 H S S (High Speed Shutter)

(See page 49)

To select a desired shutter speed

6 REC-SPEED (See page 6)

SP Normal recording speed mode

LP Recording time is 1.5 times as long as in the SP mode. For example, 120 minutes of recording is possible on a 80 minute tape

7 AUDIO-REC (See page 50)

12 bit. The sound is recorded in the 12 bit/32 kHz mode

16 bit. The sound is recorded in the 16 bit/48 kHz high-quality mode

8 INDEX (See page 30)

DAY An index signal is recorded when recording is restarted after the date has changed since the last recording

2 HOUR An index signal is recorded when recording is restarted after a lapse of more than 2 hours

9 SHUTTER (See pages 32, 41)

When set to ON, still pictures taken in the PhotoShot mode are recorded with a visual shutter effect and click sound

10 SELF-REC (See page 23)

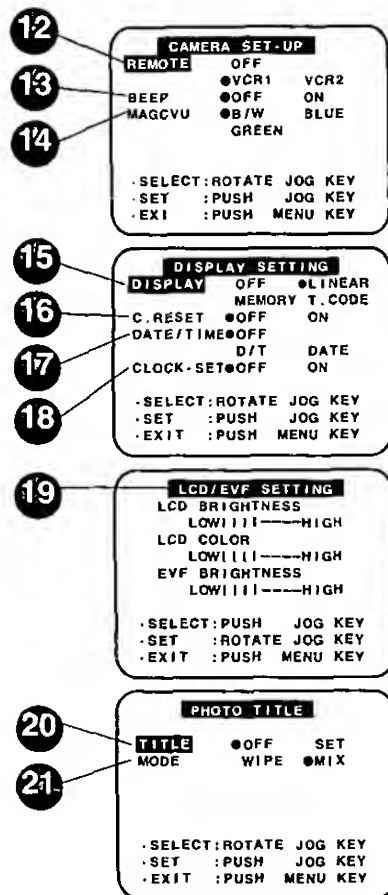
NORMAL. During self-recording, the picture on the LCD Monitor is the same as it will be recorded

MIRROR. During self-recording, the picture on the LCD Monitor is horizontally reversed

11 WIND-CUT (See page 22)

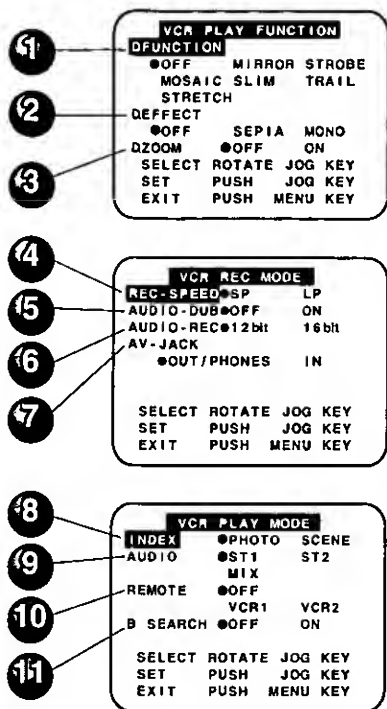
To reduce sound distortion caused by wind hitting the microphone

MENU OSD



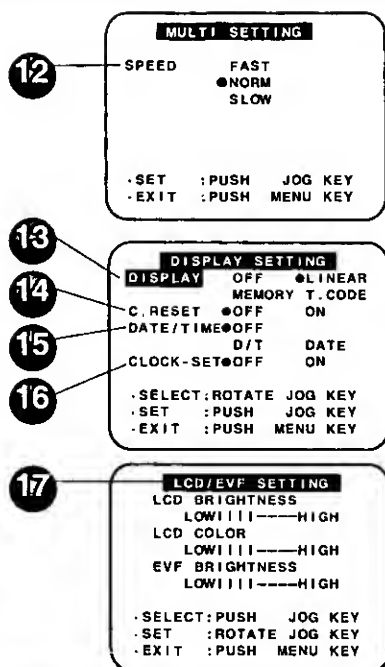
- 12 REMOTE** (See page 26.)
- VCR1:** To receive signals from the Remote Control, set to VCR1.
- VCR2:** To receive signals from the Remote Control, set to VCR2.
- OFF:** To prevent reception of signals from the Remote Control.
- 13 BEEP**
- Set to ON to hear beep when starting and stopping camera recording or when unusual conditions occur. To cancel the beep, set to OFF.
- Palmcorder will beep:
Once when you start recording
Twice when you stop recording
Repeatedly when warning of unusual conditions.
(See page 21.)
- 14 MAGICVU** (See page 43.)
- To select one of the 3 MagicVu modes slide MAGICVU/OLUX Switch to ON.
- 15 DISPLAY** (See pages 19, 40.)
- To select the desired type of display and counter indication displayed on the LCD Monitor or in the viewfinder.
- 16 C.RESET** (See page 19.)
- Setting to ON resets the counter to zero.
- 17 DATE/TIME** (See page 20.)
- The date and time can be set and displayed on the screen.
- 18 CLOCK-SET** (See page 13.)
- When set to ON, the date and time can be set on the screen.
- 19 LCD/EVF SETTING** (See page 23.)
- Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.
- 20 TITLE** (See page 38.)
- Photo Title is recorded.
- 21 MODE** (See page 38.)
- To select one of the 2 Photo Title modes.

VCR Mode Menu Screen



- 1 **DIGITAL FUNCTION** (See page 45)
To select one of the 6 digital functions
Setting to OFF cancels the previously selected digital function
- 2 **D EFFECT** (See page 45)
To select one of the 2 digital picture effects for playback Setting to OFF cancels the previously selected digital effect
- 3 **D ZOOM** (See page 40)
Set to ON to double the size of a playback image Setting to OFF cancels the previously selected digital zoom

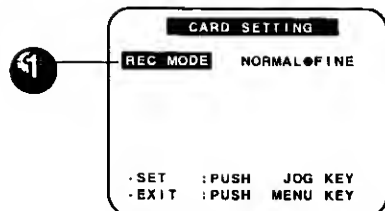
- 4 **REC-SPEED** (See page 6)
SP Normal recording speed mode
LP Recording time is 1.5 times as long as in the SP mode For example, 120 minutes of recording is possible on an 80 minute tape
- 5 **AUDIO-DUB** (See page 50)
Set to AUDIO-DUB "ON" in the Menu OSD to use the Audio Dub feature
- 6 **AUDIO-REC (PV-DV701 only)** (See page 50)
12 bit The sound is recorded in the 12 bit/32 kHz mode
16 bit The sound is recorded in the 16 bit/48 kHz high-quality mode
- 7 **AV-JACK (PV-DV701 only)** (See pages 27, 31, 52, 53)
To designate the A/V terminal as IN or OUT
- 8 **INDEX** (See pages 30, 41)
To select the desired Index Search function
PHOTO To search for Photo shot pictures
SCENE To search for scenes marked with Index signal
- 9 **AUDIO** (See page 51)
To select the desired audio playback mode after performing audio dubbing in the 12 bit mode (SP mode only)
ST1 The original sound alone is played back
ST2 The dubbed sound alone is played back
MIX The original sound and the dubbed sound are played back together
- 10 **REMOTE** (See page 26)
VCR1 To receive signals from the Remote Control, set to VCR1
VCR2 To receive signals from the Remote Control, set to VCR2
OFF To prevent reception of signals from the Remote Control
- 11 **B SEARCH (Blank Search)** (See page 24)
Select ON to go directly to a blank portion of the tape



- 12** **SPEED** (See page 47.)
 In Strobe Multi mode, used to select the interval at which a succession of still screens are captured from the playback picture.
FAST : Every 0.3 seconds
NORM : Every 0.6 seconds
SLOW : Every 1.0 seconds
- 13** **DISPLAY** (See page 19.)
 To select the desired type of display and counter indication displayed on the LCD Monitor or in the viewfinder.
- 14** **C.RESET** (See page 19.)
 Setting to ON resets the counter to zero.
- 15** **DATE/TIME** (See page 20.)
 The date and time can be set and displayed on the screen.
- 16** **CLOCK-SET** (See page 13.)
 When set to ON, the date and time can be set on the screen.
- 17** **LCD/EVF SETTING**
 (See pages 23, 40.)
 Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.

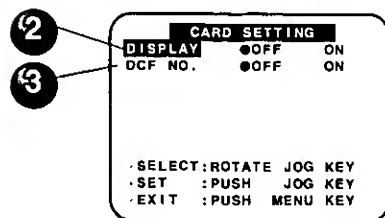
M-CARD Mode Menu Screen

[Photo Rec Mode Menu Screen]



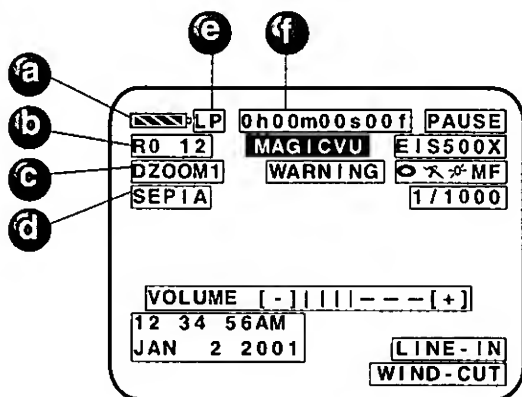
- 1** **REC MODE** (See page 32.)
 To select Photo Rec Mode.
- 2** **DISPLAY** (See page 34.)
 Select to OFF to cancel all Displays on the screen.
- 3** **DCF** (See page 34.)
 Select to OFF to cancel DCF No. on the screen.

[Photo Play Mode Menu Screen]

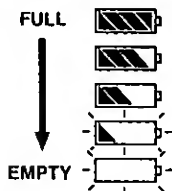


Electronic Viewfinder/LCD Monitor Indications

Here are some of the basic indications which will appear on the Palmcorder EVF and LCD Monitor. Only Date and Time indications will be recorded onto the tape.



a Battery Remaining



b Tape Remaining

(AY-DVM30EA) (AY-DVM60EA)

R0 30

R1 00

- R0 00 -

- R0 00 -

- It will take several seconds for the tape remaining indicator to operate after the tape starts moving

c Digital Zoom and other Digital Functions (See page 40)

This display appears when the digital zoom function has been activated

d Playback Effect (See page 45)

This display appears when SEPIA or MONO is selected in VCR menu

e Tape Speed Indication (See page 15)

Indicates the tape speed (SP or LP)

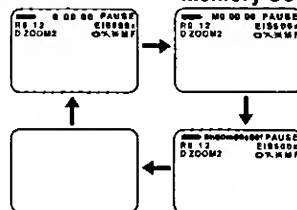
f Display ON/OFF and Counter/Time Code

The indication switches as shown below when the desired "DISPLAY" mode is selected from the menu (See pages 16, 18)

- When OFF is selected, all displays are turned off

Linear Time Counter

Memory Counter



Time Code

Memory Counter M 0.00 00

The Palmcorder will stop whenever it reaches the point where the counter was previously set to M 0 00 00 during audio dub, fast forward, or rewind

Time Code 0h00m00s00f

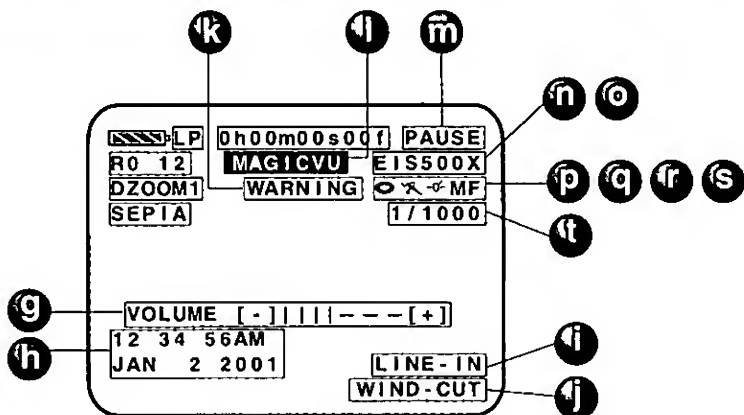
The Palmcorder calculates and displays exactly where you are on any tape in terms of hours, minutes, seconds, and frames (30 frames = 1 second)

- This display cannot be reset

IMPORTANT NOTE

- Display must be set to ON for MF, AE, W BALANCE or BACK LIGHT indications to be displayed on the EVF or LCD Panel when selected
- C RESET does not work when DISPLAY is set to OFF and T CODE

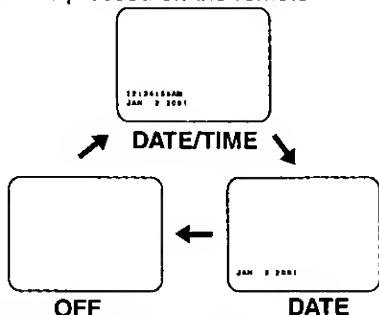
Electronic Viewfinder/LCD Monitor Indications



g Volume Display (See page 27)
The volume bar appears when the volume of the built-in speaker is being adjusted

h Date and Time Indication
(See pages 16, 18)

As shown below, the date and time indication changes each time DATE/TIME is selected from the Palmcorder's MENU (see pages 16, 18) or the DATE/TIME Button is pressed on the remote



i LINE-IN Mode Indication (PV-DV701 only) (See pages 17, 53)
This display appears when AV-JACK "IN" is set in the Menu OSD

j WIND-CUT Indication
(See page 15)

k WARNING Indication
(See page 21)
The warning displays appear in the EVF and the LCD monitor

l MAGICVU (See page 16)
This display appears when MAGICVU is set to ON

m Tape Mode Indications

REC	Recording
PHOTO	PhotoShot recording
PAUSE	Paused during recording
PLAY	Playback
R >	Repeat Playback
CHK	Recording Check
FF	Fast forward
REW	Rewind
>>	FF Search
<<	REW Search
BLANK	Blank Search
SEARCH	Index Search

n Digital EIS Indications
(See page 39)

o Zoom Magnification Level
(See page 40)

p Backlight Indication
(See page 48)

q PROGRAM-AE Indication
(See page 44)





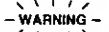

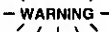
r White Balance Indication
(See page 42)

s Manual Focus Indication
(See page 48)

t Shutter Mode indication
(See page 49)

Electronic Viewfinder/LCD Monitor Indications

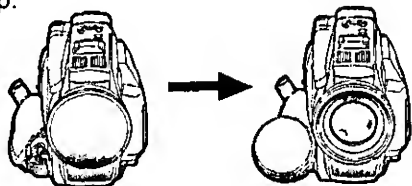
The following warning displays appear in the EVF and the LCD monitor

Indications	Condition
 TAPE NOT INSERTED	If the Palmcorder is in CAMERA mode without a cassette inserted, "⏏" will flash and "TAPE NOT INSERTED" will appear for 5 seconds. Recording will not start.
 CHECK REC TAB	If the Palmcorder is in CAMERA mode with the cassette sliding record tab opened, "⏏" will flash and "CHECK REC TAB" will appear for 5 seconds. Recording will not start.
 CANNOT REC	When Audio dub is performed and the sliding record tab is open, or a blank portion of tape is detected, "⏏" will flash and "CANNOT REC" will appear for 5 seconds.
 TAPE END	When the tape is about to end in REC mode, "⏏ END" will flash and "TAPE END" will appear for 5 seconds.
INCOMPATIBLE TAPE	When an incompatible tape is detected, "INCOMPATIBLE TAPE" will appear for 5 seconds.
NEED HEAD CLEANING	If the video heads require cleaning, "NEED HEAD CLEANING" will appear for 5 seconds.
REMOTE	When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), "CHECK REMOTE MODE (REMOTE)" appears for 5 seconds. Also appears when the Palmcorder is first turned on.
CANNOT REC LP-MODE	When an AUDIO DUB is attempted on a pre-recorded LP tape, "CANNOT REC LP-MODE" will appear for 5 seconds.
 DEW DETECTED	If excessive moisture condenses in the unit, "WARNING" will flash, "DEW DETECTED" will appear, and the Palmcorder will automatically turn OFF in 15 seconds. In this case, wait until the indicator no longer flashes when your Palmcorder is turned ON again.
  LOW BATTERY	When a battery recharge is necessary, "WARNING" will flash, "LOW BATTERY" will appear, and the Palmcorder will automatically turn OFF in 15 seconds. (See page 19)
CLOCK BATTERY	When the built-in lithium clock battery is discharged, "CLOCK BATTERY" will appear. To re-charge the lithium clock battery, connect the AC Adaptor to the Palmcorder. Recharging takes approx. 4 hours. Reset the clock after charging.
INCOMPATIBLE DATA	If you play tape recorded in a format other than NTSC or you try to copy a copy-protected data, "INCOMPATIBLE DATA" will appear.
NO SPACE LEFT	When a still image is transferred from a tape to an already full Memory Card, "NO SPACE LEFT" appears.
DISCONNECT DV CABLE	If the Palmcorder is in M-CARD mode or Photo Title (CAMERA mode) and the DV Interface Cable (i LINK) is connected, "DISCONNECT DV CABLE" appears. In this case, remove the DV Interface Cable (i LINK) from the Palmcorder.

Camera Recording

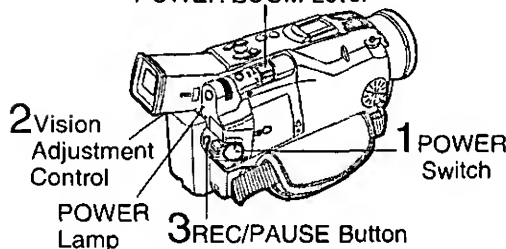
Simple Recording

Remove the lens cap and clip it to the hand strap.



Clip here

POWER ZOOM Lever



Before you begin

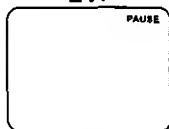
- Connect the Palmcorder to a power source. (See pages 11, 12.)
- Insert a cassette with record tab closed. (See page 6.)

1

Set POWER to CAMERA.

- The POWER Lamp lights red.
- Be sure POWER is fully turned to CAMERA position.

EVF



REC/PAUSE mode

2

With the Viewfinder Eye Cup up to your eye, adjust the Vision Adjustment Control to your eyesight. (See page 9.)

3

Press REC/PAUSE to start recording.

- "REC" is displayed on the screen.
- Press REC/PAUSE again to pause recording.
- To reduce microphone wind noise, set the WIND-CUT to ON. (See WIND-CUT on page 15.)

- When the Palmcorder is aimed at excessively bright objects, or bright lights, a vertical bar may appear in the picture. This is a normal characteristic of the CCD pick-up device. Try to avoid this whenever possible.

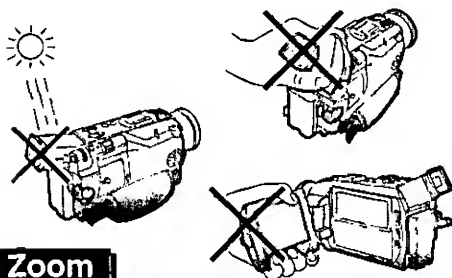
To conserve power

After 5 minutes, the Record/Pause mode will automatically change to Standby mode.

To resume recording, set POWER to OFF and then ON again.

WARNING:

- Do not leave the Palmcorder with the EVF aimed directly at the sun as this may cause damage to the internal parts of the EVF.
- Do not lift, or carry, the Palmcorder by the EVF or the LCD Monitor.



Zoom

You can gradually zoom in for close ups or zoom out for wide angle shots.

Zoom slowly : by lightly pressing the "T" (Telephoto) or the "W" (Wide Angle) side of the POWER ZOOM Lever.

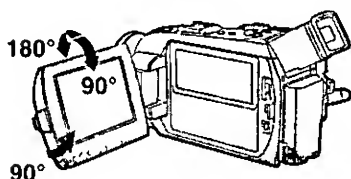
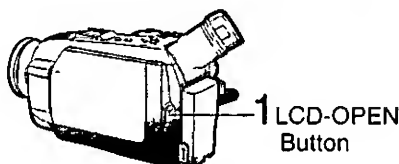
Zoom quickly : by applying more pressure.

Note

- The zooming speed ranges from a slow 17 seconds to a fast 1.5 seconds according to the amount of pressure applied to the POWER ZOOM Lever.

Using the LCD Monitor

The LCD (Liquid Crystal Display) monitor can be used while recording



To adjust the LCD BRIGHTNESS or COLOR

A Press **MENU** to display the main menu screen

B Rotate **JOG KEY** to select **LCD/EVF SETTING** from the main menu screen (See pages 16, 18)

C Press **JOG KEY** to display the LCD/EVF SETTING screen

D Press **JOG KEY** to select LCD BRIGHTNESS or LCD COLOR, then rotate **JOG KEY** to adjust

E Press **MENU** twice to exit this mode

Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Insert a cassette with record tab closed (See page 6)

1 Press **LCD-OPEN** to unlock the LCD monitor

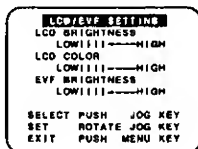
2 Swing the LCD monitor fully open and adjust the viewing angle

- The LCD monitor will automatically turn on
- When the LCD monitor is completely closed, it will shut off automatically to save power
- Adjust the LCD Brightness and/or color of the LCD monitor if necessary. Please refer to "To adjust the LCD BRIGHTNESS or COLOR" to the left

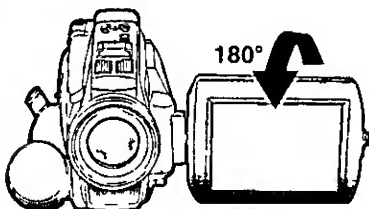
3 Start recording (See page 22)

Note

- Using the LCD monitor will reduce battery operating time
- Close the LCD monitor completely when not in use



Self Recording



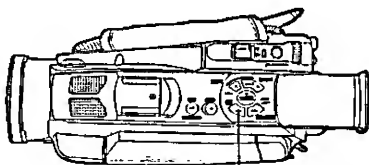
Rotate the LCD monitor 180 degrees so it faces the same direction as the lens to record yourself (CAMERA mode). The picture in the LCD monitor will appear reversed.

Set **SELFREC** to MIRROR (see page 15) in the Camera mode menu screen to see the picture as it is actually being recorded.

Camera Recording

Recording Check

To playback the final few seconds of the last recorded scene in the REC/PAUSE mode.



1 RECORDING CHECK ◀◀

- 1 Press **RECORDING CHECK** ◀◀ briefly in the REC/PAUSE mode.

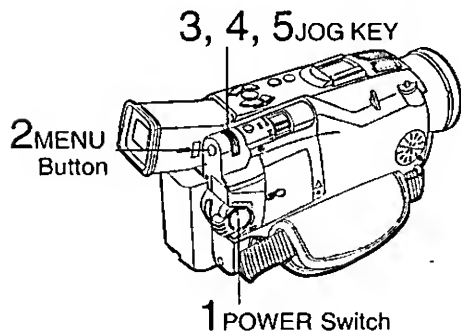
The [CHK] indication appears. After checking, the Palmcorder returns to the REC/PAUSE mode.

- For Recording Check, the Palmcorder must be in the same mode (SP or LP) as was used for recording, otherwise the playback picture is distorted.



Blank Search

You can go directly to a blank portion of tape and start recording exactly where you left off.



- 1 Set **POWER** to **VCR**.

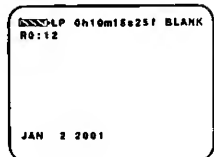
- The **POWER** Lamp lights red.
- Be sure **POWER** is fully turned to **VCR** position.

- 2 Press **MENU** to display the VCR mode menu screen.

- 3 Rotate **JOG KEY** to select **PLAY MODE**, then press **JOG KEY** to display the VCR **PLAY MODE** menu screen.

- 4 Rotate **JOG KEY** to select **BLANK SEARCH** in the VCR **PLAY MODE** menu. (See page 17.)

- 5 Press **JOG KEY** to select **ON**.
 - Press **MENU** twice to exit.
 - "BLANK" will appear on the screen.

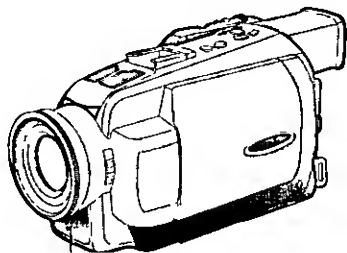


Remote Control (PV-DV701 only)

Remote Control[®]

* The Remote Control is supplied with model PV-DV701 only. However, these same functions can be operated on model PV-DV351 if the optional Remote Control is purchased.

You can operate the major functions of your Palmcorder from up to approximately 16 feet (5 m) away (indoors). Aim the IR Remote Control toward the front of the Palmcorder and press the desired buttons. (Remote Sensor is located under the lens.)



Remote Sensor



To operate Camera functions:

Set POWER to CAMERA

To operate VCR functions

Set POWER to VCR

Controlled Functions

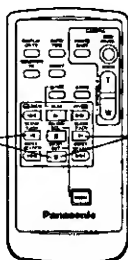
- Rec/Pause (See page 22)
- Tele (Zoom) (See page 22)
- Wide (Zoom) (See page 22)
- Date/Time (See page 20)
- Reset (See page 51)
- PhotoShot (See page 41)
- Display On TV (See page 31)
- Counter/Time Code (See page 19)
- Audio Dubbing (See page 50)
- Record (See pages 53, 54)
- Menu (See page 14)
- Play (See page 27)
- FF/Search (See page 28)
- REW/Search (See page 28)
- Pause/Select (See pages 14, 28)
- Stop/Set (See pages 14, 27)
- Slow/Frame Advance (Forward)
(See pages 28, 29)
- Slow/Frame Advance (Backward)
(See pages 28, 29)
- Index Search (Forward) (See page 30)
- Index Search (Backward) (See page 30)
- Speaker Volume (See page 27)

Remote Control (PV-DV701 only)

Remote Controlling Two Palmcorders

You can control any two Panasonic Palmcorders with one Remote control. In order for the remote to distinguish between the two units, it is necessary to set one of the Palmcorders to VCR 2. On the remote, press VCR 1 or VCR 2 to control the desired Palmcorder.

PV-DV701: Supplied
PV-DV351: Optional



For VCR 2 :
Press these buttons at the same time.

For VCR 1 :
Press these buttons at the same time.

Note

- When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), "CHECK REMOTE MODE (REMOTE)" will appear.

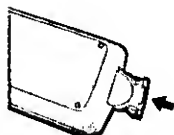
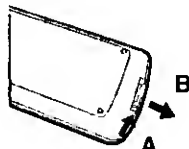


- 1** Set **POWER** to **VCR** or **CAMERA**.
 - The **POWER** Lamp lights red.
 - Be sure **POWER** is fully turned to **VCR** or **CAMERA** position.
- 2** Press **MENU** to display the **VCR** or **CAMERA** mode menu screen.
- 3** Rotate **JOG KEY** to select **SETUP** in the **CAMERA** mode menu screen or **PLAY MODE** in the **VCR** mode menu screen, then press **JOG KEY** to display the **CAMERA SET-UP** or **VCR PLAY MODE** menu screen.
- 4** Rotate **JOG KEY** to select **REMOTE**, and then press **JOG KEY** to select **VCR 2**. (See pages 16, 17). Leave the other Palmcorder set to **VCR1**.
- 5** Set the Remote Control to **VCR 1** or **VCR 2** to correspond with the Palmcorder you wish to control. (See above left.)

- After replacing the Remote Control Battery, the remote will default to **VCR 1**.

Replace the Battery

PV-DV701: Supplied
PV-DV351: Optional



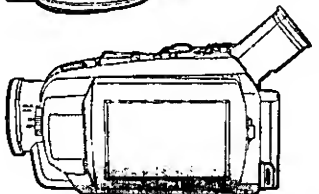
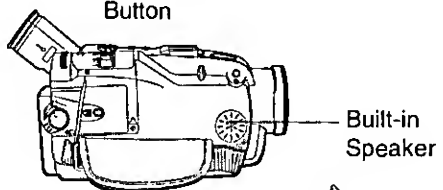
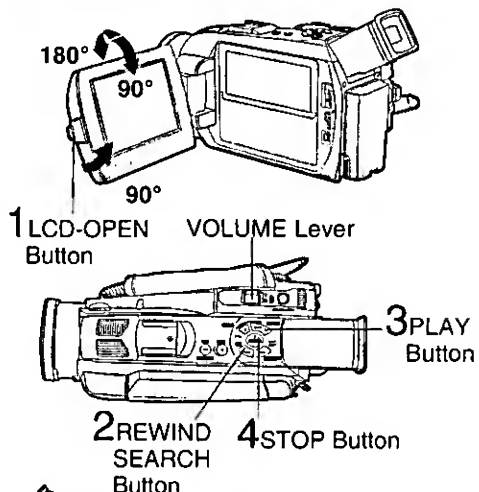
- 1** While pressing the tab in the direction of the arrow (A) with your fingernail, pull out the Battery Tray (B).
- 2** Insert the battery into the Battery Tray with the \oplus mark facing up.
Do not reverse the polarity.
- 3** Insert the Battery Tray.

Replace battery with Panasonic PART NO. VSBW0004 (CR2025) only. Use of another battery may present a risk of fire or explosion. Caution: battery may explode if mistreated. Dispose of used battery properly. Keep away from children. Do not recharge, disassemble or dispose of in a fire.

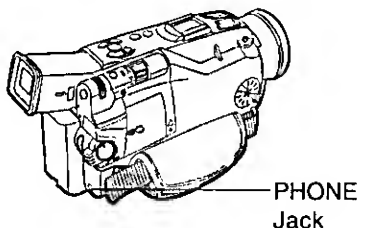
Playback Your Recordings

Playback using the LCD Monitor

You can also use the LCD monitor to playback your recording.



You can place the Palmcorder on a table, etc. for viewing. Rotate the LCD Monitor 180° and swing it up against the Palmcorder body as shown.



Before you begin

- Connect the Palmcorder to a power source. (See pages 11, 12.)
- Insert a recorded cassette.
- Set POWER to VCR.

1 Press **LCD-OPEN** to unlock the LCD monitor and swing open.

2 Press **◀ (REWIND/SEARCH)** to rewind the tape.

3 Press **▶ (PLAY)** to start playback.

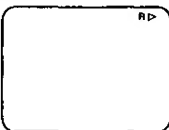
To adjust the volume:

Press **VOLUME** to adjust the volume of the built-in speaker.

- The volume setting screen appears.

4 Press **■ (STOP)** to stop playback.

- When the tape reaches its beginning during rewind or rewind search, it will stop automatically.
- If you press **PLAY** for more than 5 seconds in **STOP** mode, the Palmcorder will go into Repeat Playback mode when the tape reaches its end. The letter "R ▷" will appear in the EVF and LCD monitor. To exit the Repeat Playback mode, turn the Palmcorder OFF.



Note

- When a tape recorded in LP mode on another digital video camera is played back on this unit, the picture may appear mosaic.
- Using the LCD monitor reduces battery operating time.
- You can connect earphones (not supplied) to the **PHONE Jack**.

For PV-DV701 users:

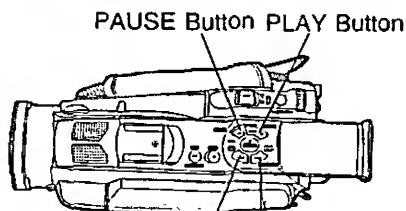
To use the **PHONE Jack**, first set to **AV-JACK "OUT/PHONES"** in the **VCR Mode Menu**. (See page 17.)

Playback Your Recordings

Special Effect Features During Playback

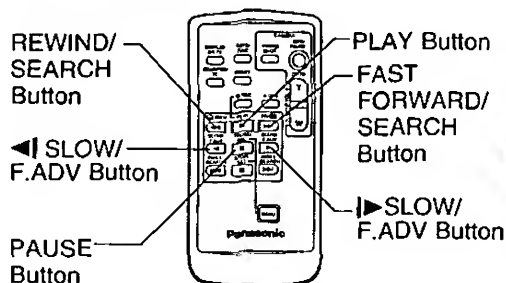
Note

- Sound is muted during all special effects.



A, B **REWIND/SEARCH** Button A, B **FAST FORWARD/SEARCH** Button

PV-DV701: Supplied
PV-DV351: Optional



Fast Forward/Rewind Check

Monitor normal picture playback during fast forward or rewind.

- Hold down ►► (FAST FORWARD/SEARCH) during fast forward.
- Hold down ◄◄ (REWIND/SEARCH) during rewind.
- The picture will appear for as long as the button is held down.

Rapid Visual Search

A During playback, hold down ►► (FAST FORWARD/SEARCH) or ◄◄ (REWIND/SEARCH).

The search will continue for as long as the button is held down.

OR

B Press ►► (FAST FORWARD/SEARCH) or ◄◄ (REWIND/SEARCH) once for a continuous rapid visual search.

Press ► (PLAY) to release.

Note

- When executing a rapid visual search, the picture may become bluish for an instant or mosaic. This is normal during this mode.



STILL Picture

Press II (PAUSE) during playback.

Press ► (PLAY) or PAUSE to release.

Note

- To protect the tape and video heads, your Palmcorder's operating modes will revert as follows:

STILL → STOP (after 3 minutes.)

Slow Motion Playback

(Remote Control Only)

Forward Slow = Press ► SLOW/F.ADV during play.

Reverse Slow = Press ◄ SLOW/F.ADV during play.

Press PLAY to release. (During reverse slow motion playback, time code indication may not change regularly.)

Note

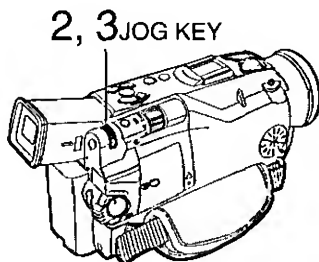
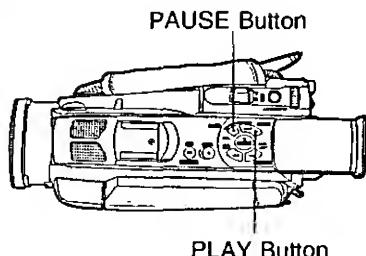
- Palmcorder will automatically STOP when in slow motion for more than 10 minutes.
- During slow motion playback, picture may move up and down. This is normal.
- When you start or stop slow motion playback, the picture may become bluish for an instant.

Playback Your Recordings

Special Effect Features During Playback (Continued)

Note

- Sound is muted during all special effects.



Variable Speed Search

- 1 Press ► (PLAY) to start playback.
- 2 Press JOG KEY for about 1 second.
- 3 Rotate JOG KEY to adjust the playback speed.
 - Rotate JOG KEY clockwise for forward playback.
 - Rotate JOG KEY counterclockwise for reverse playback.

To return to normal playback:

Press ► (PLAY). Playback will continue at normal speed.

Note

- The Variable Speed Search function offers a choice of six playback speeds (1/5X, 1X, 2X, 5X, 10X, 20X) both in forward and reverse directions.
- The review playback at the 1X speed is playback in reverse direction.
- During the Variable Speed Search (at a speed other than 1X), mosaic-like patterns will appear in the picture.
- During the Variable Speed Search, sound is muted.

Jog Frame by Frame Search

(Palmcorder only)

During Still mode, rotate JOG KEY to advance or reverse the picture one frame at a time.

Frame by Frame Advance

(Remote Control Only)

Press PAUSE during playback.

Press ► SLOW/F.ADV to do a frame by frame advance.

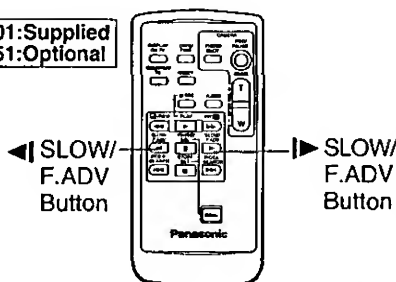
Press ◀ SLOW/F.ADV to do a frame by frame reverse.

Press PLAY to release.

Note

- If you hold down SLOW/F.ADV, you can see a continuous series of still images at a slower speed than normal slow mode.
- During frame by frame advance, a few frames may move automatically, and the picture may become bluish for an instant.

PV-DV701: Supplied
PV-DV351: Optional

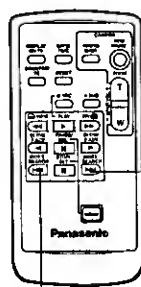
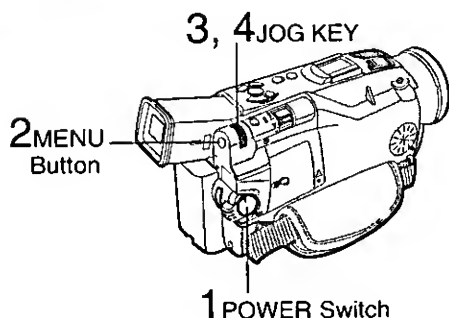


Playback Your Recordings

Special Effect Features During Playback (Continued)

Note

- Sound is muted during all special effects.



PV-DV701: Supplied
PV-DV351: Optional

B INDEX SEARCH
(fast forward) Button

B INDEX SEARCH
(rewind) Button

Top Scan

If you hold down INDEX SEARCH more than 2 seconds, the Palmcorder will scan for scenes (or PhotoShots) and playback the first few seconds of each.

To cancel this function, press PLAY or STOP.

Note

- Search will not work if there is succession of PhotoShots.

Index Forward/Reverse Search

(Remote Control Only)

Search for a particular scene by using the electronic index marks placed at the beginning of each recording.

- 1** Set the **POWER** to **VCR**.
 - The **POWER** lamp lights red.
 - Be sure **POWER** is fully turned to **VCR** position.
- 2** Press **MENU** to display the **VCR** mode menu screen.
- 3** Rotate **JOG KEY** to select **PLAY MODE**, then press **JOG KEY** to display the **VCR PLAY MODE** menu screen.
- 4** Rotate **JOG KEY** to select **INDEX**, and then press **JOG KEY** to select **PHOTO** or **SCENE**. (See page 17.)

A Place the Palmcorder in the **VCR STOP** mode.

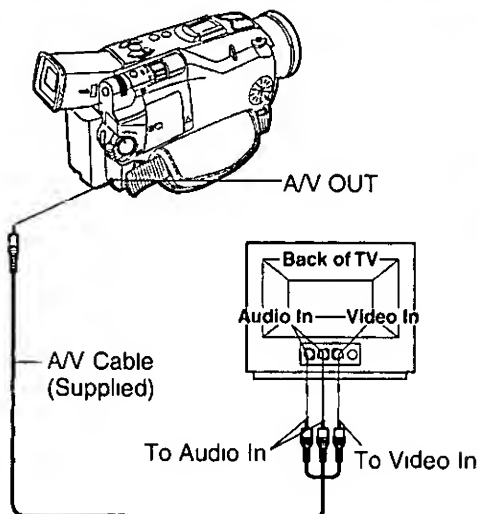
B Press **INDEX SEARCH** fast forward or rewind for the number of recordings (indexes) forward or back you want to view. The Palmcorder will advance or rewind to the desired recording and automatically start playback.

- The number of times you pressed the button is displayed in the EVF and the LCD monitor if you set **INDEX** on the **VCR** menu to **SCENE**. (See page 17.) (Ex., if you press the button three times, "S3" will appear.)
- If the interval between scenes is less than 1 minute, index search may not operate properly.
- Response time from pressing the button and the change in the scene number is quite slow. Do not press **INDEX SEARCH** rapidly and continuously.
- During **Reverse Index Search** mode, playback will not begin when a tape rewinds all the way to the beginning.

Playback Your Recordings

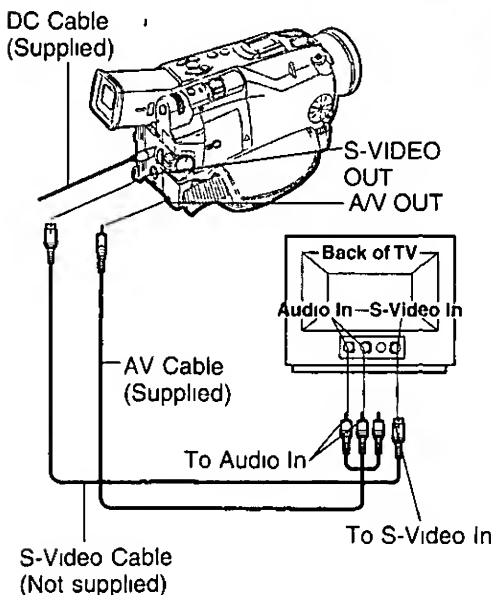
View Recording/Playback on your TV

[TV with AUDIO/VIDEO IN Jacks]



[TV with S-VIDEO IN Jacks]

For best Chrominance and Luminance, use the S-Video connection if available on your TV



Before you begin

- When using S-VIDEO Connector, insert the DC Cable into the DC IN Terminal (See page 12)

1

Set POWER to CAMERA or VCR

To view what the Palmcorder is recording or to playback a tape on your TV

Note

For PV-DV701 users

When using VCR mode, first set to AV-JACK "OUT/PHONES" in the VCR Mode Menu (See page 17)

2

Turn your TV ON and set it to LINE INPUT or S-VIDEO

Check your TV operating instructions for further information

3

Start playback or begin a recording

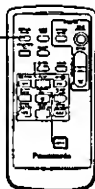
- Make sure the Palmcorder and TV are turned off while connecting
- Please connect the AV Cable securely

Note

(Remote Control Only)

You can display the various EVF and LCD indications on your TV by pressing DISPLAY ON TV on remote control Press again to remove the indications

DISPLAY
ON TV
Button



PV-DV701 Supplied
PV-DV351 Optional

CATV System Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical code in Canada) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical

Card Features

Card PhotoShot

You can record still images to a Memory Card.

Warning

- Memory Card will not work when DV interface Cable (i.LINK) is connected.

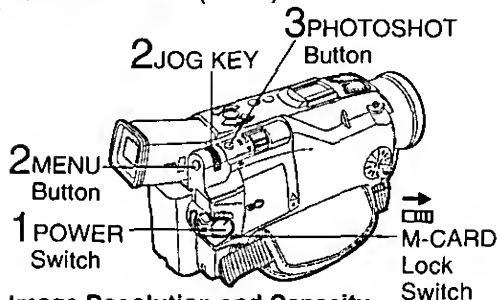


Image Resolution and Capacity (supplied 8MB Memory Card)

REC Mode	Image Resolution	Capacity
FINE	640 x 480	Approx. 60 images
NORMAL	320 x 240	Approx. 210 images

- The number of images given for each mode applies when all images are taken in same mode.
- You can change recording modes at any time before capturing an image.
- The number of images that can be captured may differ depending on the subject. After capturing an image, the number may not decrease, or it may decrease by two. This is normal.

Warning

- While "PROCESSING" is displayed, **DO NOT turn off the Palmcorder or unplug the AC Adaptor** (supplied) because this will cause irreversible damage to the memory.

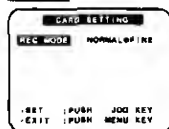
Cautions for the Memory Card

- While Memory Card data is being read, do not remove it, turn off the power, or subject unit to vibrations and shocks.
- Do not leave the Memory Card in a place with high temperature, exposed to direct sunlight, or where electromagnetic waves and static electricity can be generated.
- Electromagnetic waves, static electricity, malfunction of the Digital Video Palmcorder or of the Memory Card itself could erase the data recorded on it. To prevent the loss of picture data, we recommend that you make a backup copy on the computer.
- Do not bend or drop the Memory Card as this could damage it or the captured contents.
- Do not touch the connector on the rear edge of the Memory Card with your fingers and take care that no dirt, dust or water enters it.
- Do not affix other labels to the Memory Card face or back as Card insertion/removal may become impossible.

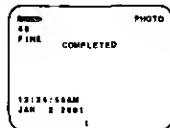
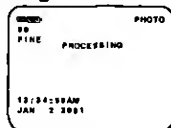
Before you begin

- Connect the Palmcorder to a power source. (See pages 11, 12.)
- Set POWER to OFF before inserting a Memory Card. (See page 10.)

- Slide the M-CARD Lock Switch to **unlock**, then set **POWER** to M-CARD.
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to M-CARD position.
 - "PLAY: PUSH PLAY KEY" is displayed for 10 seconds. (See page 33.)
- Press **MENU** to display **CARD SETTING** menu, then press **JOG KEY** to select **NORMAL** or **FINE**.



- Press **MENU** to exit this menu.
- Press **PHOTOSHOT** to record an image.



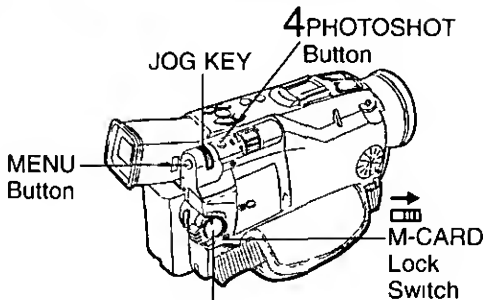
- The PhotoShot image is recorded to the Memory Card.
- When SHUTTER is set to ON (see page 15), still pictures are recorded with a visual shutter effect and click sound. If set to OFF, the still image will be displayed only.

Recording Images From a Tape

You can record still images from a cassette tape to a Memory Card

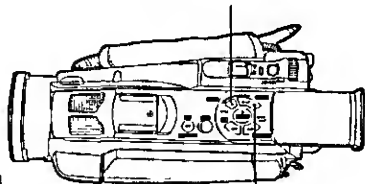
Warning

- Memory Card will not work when DV interface Cable (i LINK) is connected



2 POWER Switch

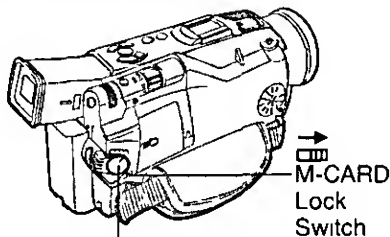
3 PAUSE Button



3 PLAY Button

Playback Still Images

You can view the images on the Memory Card



1 POWER Switch

Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to OFF before inserting a Memory Card (See page 10)

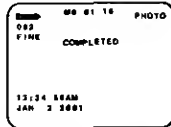
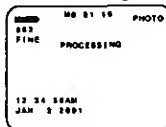
1 Repeat steps 1 and 2 on page 32

2 Set POWER to VCR

- The POWER lamp lights red
- Be sure POWER is fully turned to VCR position

3 Press ► (PLAY) to start playback of the cassette tape. And then, press II (PAUSE) to select an image

4 Press PHOTOSHOT to record the desired image to the Memory Card



- When PHOTOSHOT is pressed in PLAY or SLOW mode, the screen goes to STOP mode
- To playback the images of the Memory Card, see pages 33~34
- When Variable Speed Search is done (see page 29), this feature can not be used

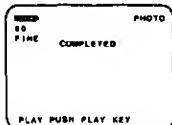
5 Repeat steps 3~4 to record another image to the Memory Card

Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)

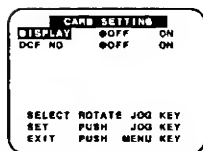
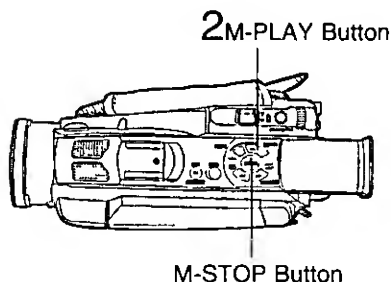
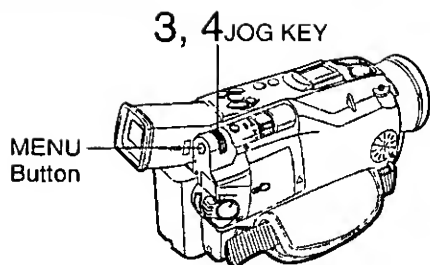
1 Slide the M-CARD Lock Switch to unlock, then set POWER to M-CARD

- The POWER lamp lights red
- Be sure POWER is fully turned to M-CARD position
- "PLAY PUSH PLAY KEY" is displayed for 10 seconds



(Continued on next page)

Card Features



DISPLAY Select OFF to remove all displays from the screen

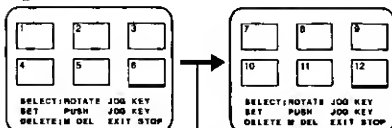
DCF (Design rule for Camera File system)

Select OFF to cancel DCF No on the screen

Note

- If the file number is changed, the Palmcorder cannot read the file data
- This product is compliant with DCF (Design rule for Camera File System) Images saved on the Memory Card using other Digital Still Cameras that are compliant with DCF can be viewed on this product

- 2 Press **▶ (M-PLAY)** to display the Multi playback screen
 - "PLEASE WAIT" appears on-screen
 - Rotate JOG KEY to scroll through Multi image screen pages (6 images per page) and select an image
 - The selected image is underlined in green



"PLEASE WAIT" is displayed

- Press MENU to display CARD SETTING menu screen
- Press **■ (M-STOP)** to return to the Card PhotoShot REC Mode (See page 32)

- 3 Press JOG KEY to display the selected image as a full-size screen
 - "PLEASE WAIT" appears on-screen

- 4 Rotate JOG KEY to select **BACK** (previous image), **MULTI** (Multi Image screen), or **NEXT** (next image)



- Press **■ (M-STOP)** to return to the Multi Playback screen

Warning

- While "PLEASE WAIT" is displayed, **DO NOT** turn off the Palmcorder or unplug the AC Adaptor (supplied) because this will cause irreversible damage to the memory

Delete Specific Images

You can delete unwanted images and increase the remaining image memory.

Warning:

Once deleted, images cannot be restored.

DELETE PAGE

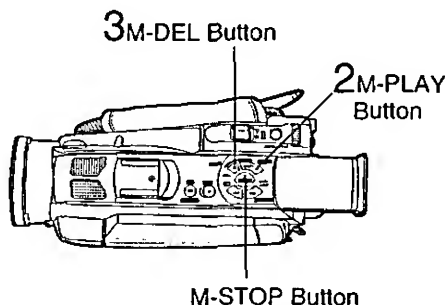
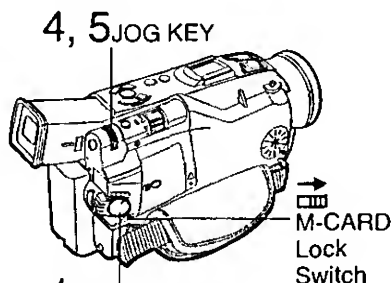
Delete specific images from a page.

DELETE ALL

Delete all images. (See page 36.)

FORMAT

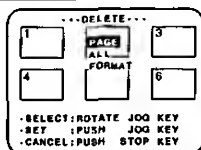
Delete all data. (See page 37.)



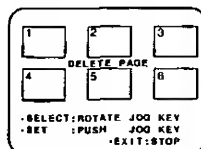
Before you begin

- Connect the Palmcorder to a power source. (See pages 11, 12.)
- Set POWER to OFF before inserting a recorded Memory Card. (See pages 32, 33.)

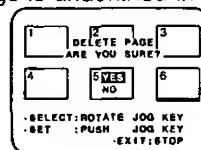
- 1 Slide the M-CARD Lock Switch to unlock, then set POWER to M-CARD.
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to M-CARD position.
 - "PLAY: PUSH PLAY KEY" is displayed for 10 seconds.
- 2 Press ► (M-PLAY) to display the Multi playback screen.
 - "PLEASE WAIT" appears on-screen.
- 3 Press II (M-DEL) to display the DELETE menu, then rotate and press JOG KEY to select **PAGE**.



- DELETE PAGE menu is displayed.



- 4 Rotate and press JOG KEY to select and set the image to be deleted.
 - The selected image is underlined in pink.



- 5 Rotate JOG KEY to select **YES**, and press JOG KEY to delete the selected image.
 - To cancel delete, press ■ (M-STOP) or rotate and press JOG KEY to select NO.
 - "PLEASE WAIT" appears on-screen during deletion.
 - To delete other images, repeat steps 4-5.

Warning

- While deleting image, DO NOT turn off the Palmcorder or unplug the AC Adaptor (supplied) because this will cause irreversible damage to the memory, resulting in reduced image storage capacity.

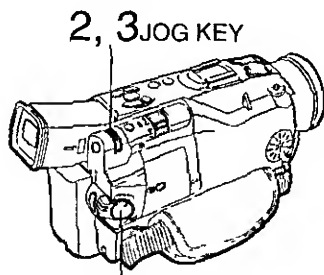
Card Features

Delete All Image Pages

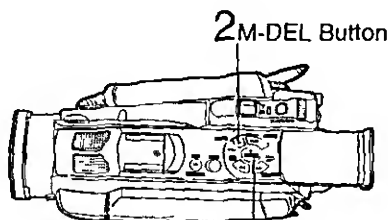
You can delete all images from the Memory Card easily with this operation

Warning

Once deleted, images cannot be restored



POWER Switch



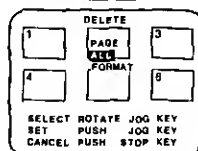
M-STOP Button

Before you begin

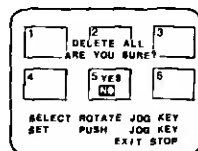
- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)

1 Do steps 1 and 2 on page 35

2 Press **II** (M-DEL) to display the DELETE menu. Then, rotate and press JOG KEY to select **ALL**

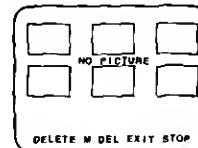


- The screen below is displayed
- To cancel delete, press **■** (M-STOP) or rotate and press JOG KEY to select NO



3 Rotate and press JOG KEY to select **YES**

- "PLEASE WAIT" is displayed on the screen, and then "NO PICTURE" is displayed



- Press **■** (M-STOP) to return to the Card PhotoShot REC Mode screen (See page 32)

Warning

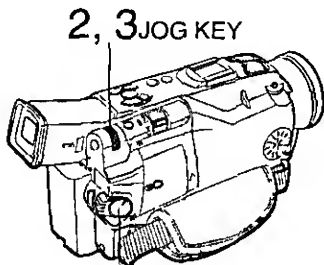
- While deleting image, **DO NOT** turn off the Digital Video Camcorder or unplug the AC Adaptor (supplied) because this will cause irreversible damage to the memory, resulting in reduced image storage capacity

Format the Memory Card

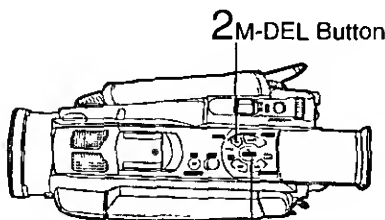
You can easily format your Memory Card using this operation

Warning

Formatting permanently removes all image data



POWER Switch



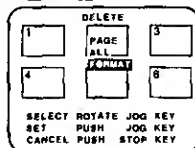
M-STOP Button

Before you begin

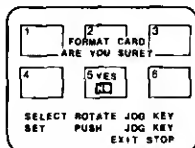
- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)

1 Do steps 1 and 2 on page 35

2 Press **II (M-DEL)** to display the DELETE menu, then **rotate and press JOG KEY** to select **FORMAT**

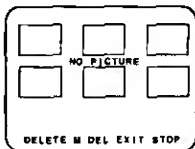


- The screen below is displayed
- To cancel format, press **■ (M-STOP)** or rotate and press JOG KEY to select NO



3 Rotate and press JOG KEY to select **YES**

- "PLEASE WAIT" is displayed on the screen as all image data is deleted from Memory Card. Deletion is complete when "NO PICTURE" is displayed



Warning

- While deleting image, **DO NOT** turn off the Palmcorder or unplug the AC Adaptor (supplied) because this will cause irreversible damage to the memory, resulting in reduced image storage capacity

- Press **■ (M-STOP)** to return to the Card PhotoShot REC Mode screen (See page 32)

Card Features

Photo Title

You can record PhotoShot images from a Memory Card to a cassette to be used as a WIPE or MIX effect

- A great many fun-filled titles (preset titles) have been recorded on the supplied Memory Card (See page 67)
- These preset titles will also be erased when the Card is formatted

Note

When Photo Title is set to ON, the selected image and Title will appear before each recording is made

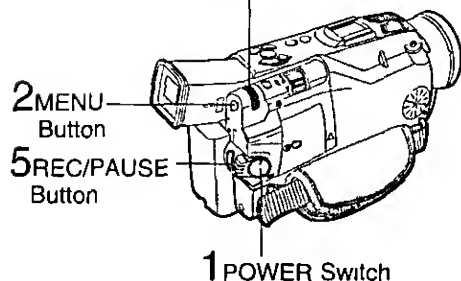
WIPE The Photo title is replaced with the current scene in a wiping motion



MIX The photo title is replaced with the current scene in a gradual mixing effect



2, 3, 4 JOG KEY



Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)

1

Set POWER to CAMERA

- The POWER lamp lights red
- Be sure POWER is fully turned to CAMERA position

2

Press MENU to display the CAMERA menu screen. Then rotate and press JOG KEY to select **PHOTO TITLE**

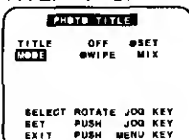


3

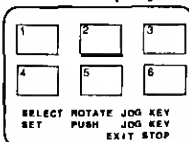
Rotate and press JOG KEY to select and set **MODE** and then **TITLE**

1st Select and set MODE (WIPE or MIX)

2nd Select and set TITLE to "SET"



- "PLEASE WAIT" appears on-screen
- The Multi image screen is displayed



4

Rotate and press JOG KEY to select and set an image

- "PLEASE WAIT" is displayed while image is processed. Then, "PHOTO TITLE SET" is displayed for approx 3 seconds, and the screen goes back to the Camera mode screen
- After Photo Title is performed, Digital Function turns off
- There are 12 pre-installed files

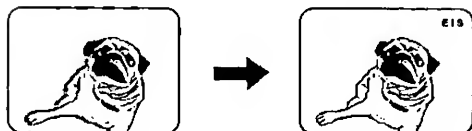
5

Press REC/PAUSE to start recording with Photo Title

- WIPE or MIX screen is displayed at beginning of the recording. Then the Photo Title setting will be cleared automatically

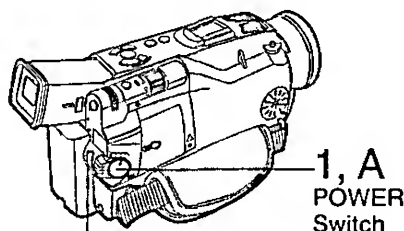
Dual Digital Electronic Image Stabilization System (D.E.I.S.)

This feature helps compensate for any unintentional hand or body movement. It can be used in both the Recording and Playback (VCR) modes.

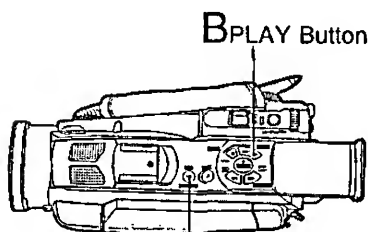


NORMAL

EIS ON



3 REC/PAUSE Button



**2, 4, C, D
EIS Button**

Note

- Other Digital Functions are turned off automatically when the EIS and Digital Zoom are selected.

CAMERA mode

- 1 Set POWER to CAMERA.**
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to CAMERA position.
- 2 Press EIS to stabilize the picture.**
 - Picture flicker may be observed when taping under fluorescent lighting conditions.
 - The EIS indicator flashes when the light level is inadequate.
 - Turn D.E.I.S. OFF during recording when using a tripod.
- 3 Press REC/PAUSE to start recording.**
- 4 Press EIS again to cancel.**
 - Be sure that D.E.I.S. is turned off when not needed.

D.E.I.S. may not function when...

- Palmcorder movement is too extreme.
- Recording a subject with distinct horizontal or vertical stripes.
- Recording in low light situations.
- Recording a subject under a great amount of fluorescent light.
- Recording a scene with very fast motions.

VCR mode

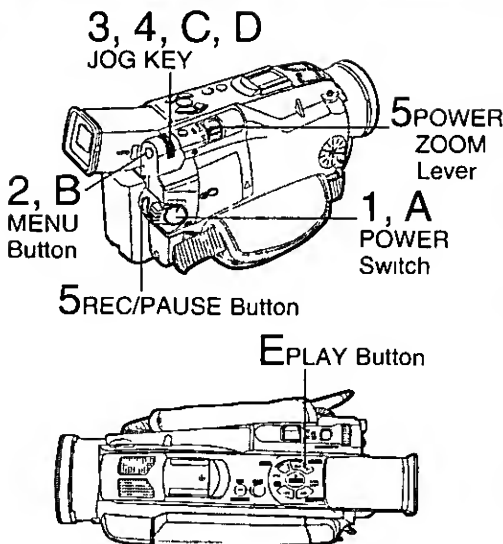
- A Set POWER to VCR.**
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to VCR position.
- B Press ► (PLAY) to start playback.**
- C Press EIS to stabilize the picture.**
- D Press EIS again to cancel.**
 - Be sure that D.E.I.S. is turned off when not needed.

Note

- When using D.E.I.S. in VCR mode, the image size is slightly larger.

Special Features

Digital Zoom



Zoom In ("T")



Zoom Out ("W")

Note

- Other Digital Functions are turned off automatically when the EIS and Digital Zoom are selected

VCR mode

- A** Set **POWER** to **VCR**
- The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **VCR** position
- B** Press **MENU** to display the **VCR MENU** screen
- C** Rotate **JOG KEY** to select **PLAY FUNCTION**, then press **JOG KEY** to display the **VCR PLAY FUNCTION** menu screen

CAMERA mode

- Set **POWER** to **CAMERA**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **CAMERA** position
- Press **MENU** to display the **CAMERA MENU** screen
- Rotate **JOG KEY** to select **DIFUNCTION**, then press **JOG KEY** to display the **CAMERA FUNCTION** menu screen
- Rotate **JOG KEY** to select **DZOOM**, then press **JOG KEY** to select **D ZOOM1** or **D ZOOM2**
 - D ZOOM1** from 10X to 25X
 - D ZOOM2** from 10X to 500X
 - OFF** Turn off **D ZOOM**
- Press **REC/PAUSE** to start recording and press **POWER ZOOM** to zoom in or zoom out
 - The magnification level is always displayed in the **EVF** or the **LCD** monitor when **DISPLAY** is set to **ON** (See pages 16, 18)
- Repeat steps 2-4 to select **OFF** to cancel this feature

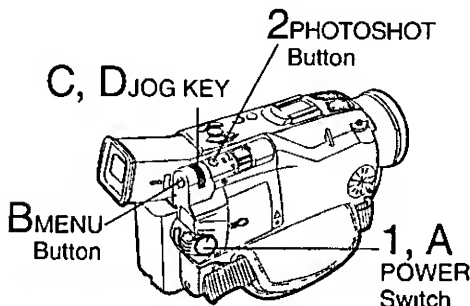
Note

- The normal optical zoom functions from 1X to 10X
- As magnification increases, resolution significantly decreases
- Because the image is enlarged digitally, the picture may become distorted when higher magnification levels are used
- When the level falls below 10X, the normal zooming function will resume
- Focus distance becomes 4 feet (1.2 m) if the lens is in full telephoto

- D** Rotate **JOG KEY** to select **DZOOM**, then press **JOG KEY** to select **ON**
- Press **MENU** twice to exit
- E** Press **▶ (PLAY)** to start playback
- The center portion of the image doubles in size
- F** Repeat steps B-D to select **OFF** to cancel this feature

Digital PhotoShot

Use this feature to record a seven second (approx) still image from the current camera picture. Audio is also recorded for on-the-spot narration. Or, you can add narration later with the Audio Dubbing feature to make an interesting slide show, etc (See page 50)



- 1** Set **POWER** to **CAMERA**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **CAMERA** position
- 2** Press **PHOTOSHOT** in Record/Pause mode "**PHOTO**" will appear in the EVF or the LCD monitor

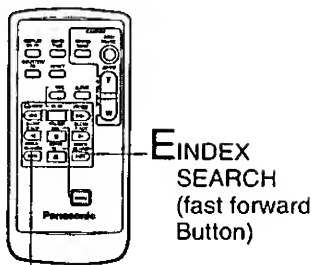


- If **SHUTTER** on the menu screen is set to **ON**, a sound effect similar to the shutter of a film camera will be heard when **PHOTOSHOT** is pressed
- When **PHOTOSHOT** is pressed, the playback image takes approx 7 seconds to process. After that, the Camera mode screen will be displayed

Index Search (Photo/Scene)

(Remote Control Only)

PV-DV701 Supplied
PV-DV351 Optional



E INDEX SEARCH
(rewind Button)

Note

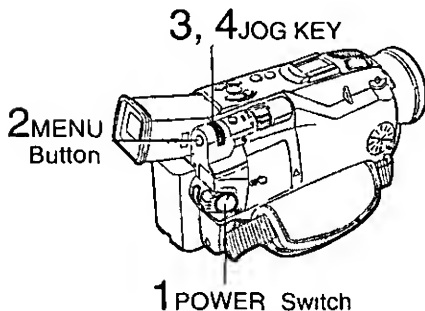
- The picture quality will deteriorate slightly
- The tape remaining indicator will not appear while the **PHOTOSHOT** feature is used
- In the Photo/Scene Index Search mode, the shutter sound effect may not be able to be heard even when **SHUTTER** is set to **ON**
- Photo Index Search may fail to detect a recorded PhotoShot image if the image is 3 seconds or less

- A** Set **POWER** to **VCR**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **VCR** position
- B** Press **MENU** to display the VCR mode menu screen
- C** Rotate **JOG KEY** to select **PLAY MODE**, and press **JOG KEY** to display the VCR **PLAY MODE** menu screen
- D** Rotate **JOG KEY** to select **INDEX**, and press **JOG KEY** to select **PHOTO** or **SCENE**
 - Press **MENU** twice to exit
- E** Press **INDEX SEARCH** fast forward or rewind on the remote control to advance or rewind the tape to playback a PhotoShot scene. To view the next PhotoShot, **INDEX SEARCH** must be pressed again

Special Features

White Balance

Auto White Balance automatically maintains optimum color balance in most lighting conditions. However, when using Digital Functions, etc., you may get better results using the manual adjustment.



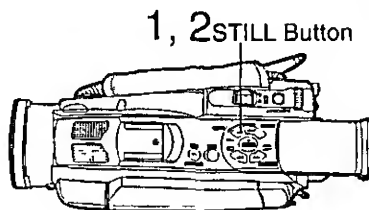
- 1 Set POWER to CAMERA**
 - The POWER lamp lights red
 - Be sure POWER is fully turned to CAMERA position
- 2 Press MENU** to display the menu screen
- 3 Rotate JOG KEY** to select **ADJUST**, and then **press JOG KEY** to display the CAMERA ADJUST menu screen
- 4 Rotate JOG KEY** to select **WBALANCE**, and then **press JOG KEY repeatedly** to select AUTO, Indoor halogen lamp "☼", or Outdoors "☀"

- ☼ When the source illumination is a halogen lamp
- ☀ When shooting outdoors on a sunny day

AUTO Automatically maintains optimum color balance in most lighting conditions

Recording Still Pictures

You can record still pictures of any desired duration together with sound.

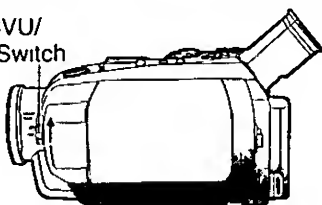


- 1 While in RECORD mode, press STILL and hold for 2 seconds** to capture a still picture. The captured still picture will be recorded together with sound.
- 2 Press STILL once again** to release the still picture. The camera will resume recording real-time pictures.

MagicVu™ IR Filter (0 Lux)

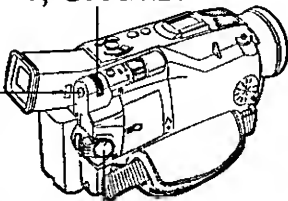
MagicVu allows you to record video in total darkness. You can select the color of image B/W, green, or blue (See page 16)

2 **MAGICVU/0LUX Switch**



4, 5 **JOG KEY**

3 **MENU Button**



1 **POWER Switch**

- 1 Set **POWER** to **CAMERA**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **CAMERA** position
- 2 Slide **MAGICVU/0LUX** to **ON**
 - A black and white image appears
- 3 Press **MENU** to display the menu screen
- 4 Rotate **JOG KEY** to select **SET-UP**, and then press **JOG KEY** to display the **CAMERA SET-UP** menu screen
- 5 Rotate **JOG KEY** to select **MAGICVU**, and then press **JOG KEY** repeatedly to select **B/W**, **BLUE**, or **GREEN**
 - Press **MENU** twice to exit
 - To cancel this feature, slide **MAGICVU/0LUX** to **OFF**

Note

- The subject can be up to 3 m (9 feet) away

MagicPix™ Images

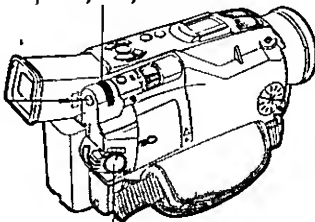
Color recording of video or still images onto the Mini DV tape in low lighting (See pages 15, 45)

Note

- MagicPix cannot be used with still images on the Memory Card (See "Card PhotoShot" on page 32)

3, 4, 5 **JOG KEY**

2 **MENU Button**



1 **POWER Switch**

- 1 Set **POWER** to **CAMERA**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **CAMERA** position
- 2 Press **MENU** to display the menu screen
- 3 Rotate **JOG KEY** to select **DIFUNCTION**, and then press **JOG KEY** to display the **CAMERA FUNCTION** menu screen
- 4 Rotate **JOG KEY** to select **DIFUNCTION**, and then press **JOG KEY** repeatedly to select **MAGICPIX**
 - Press **MENU** twice to exit



- 5 To cancel the Digital Function, press **JOG KEY** repeatedly to select **OFF**

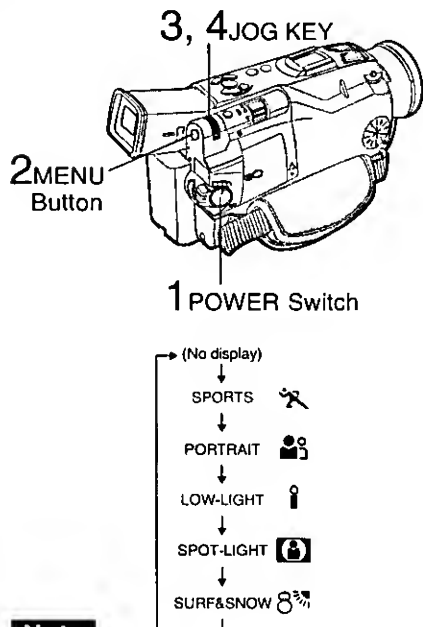
Special Features

Program AE

The Auto Exposure feature can be used to make quality recordings in a variety of scene situations.

Note

- When MagicVu is ON, Program AE and H.S.S. cannot be set in the menu.



- 1 Set **POWER** to **CAMERA**.
 - The **POWER** lamp lights red.
 - Be sure **POWER** is fully turned to **CAMERA** position.
- 2 Press **MENU** to display the menu screen.
- 3 Rotate **JOG KEY** to select **ADJUST**, and then press **JOG KEY** to display the **CAMERA ADJUST** menu screen.
- 4 Rotate **JOG KEY** to select **PROG/AE**, then press **JOG KEY** repeatedly to select one of the five modes shown below.
- 5 Repeat steps 2-4 to select **OFF** to cancel this feature.

Mode	Indication
	For recording fast action scenes.
	For recording only subjects in the foreground, while ignoring subjects in the background.
	For recording in extreme low light conditions.
	Recording in situations where subjects are under a spotlight(s).
	For recording in locations with a high degree of "Dazzle," such as snow slopes and the seashore.

Note

SPORTS mode

- The recorded images will not be so blurred when they are viewed later using slow or still picture playback.
- When playing back a sports mode recording, the movement may appear slightly jerky.
- Do not use this mode when recording under fluorescent, mercury, or sodium lighting. These types of lights will affect the color and brightness of the images.
- A vertical band of light might appear when recording objects that are brightly illuminated or which are highly reflective.
- If the amount of light is insufficient, the **SPORTS** "X" indicator will flash in the EVF or the LCD monitor.
- The image may flicker if this mode is used indoors.

PORTRAIT mode

- The image may flicker if this mode is used indoors.

LOW-LIGHT mode

- Scenes recorded in extremely low light levels may not come out properly.

SPOT-LIGHT mode

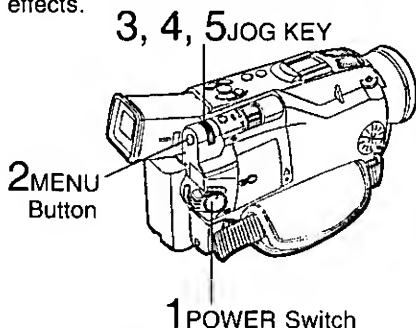
- If the recorded subject is extremely bright, the picture may appear whitish.

SURF&SNOW mode

- If the recorded subject is extremely bright, the picture may appear whitish.
- It is not possible to select the **SPORTS** mode or **PORTRAIT** mode together with the **MagicPix** mode in the Digital function camera menu.

Other Digital Functions

Use the following features to add interest and professionalism to your recordings or playback. Select from twelve special effects.



Types of Digital Functions

MIRROR

Symmetrical image from the current camera picture.

STROBE

The recording appears as a sequence of still frames.

MOSAIC

The picture appears in a mosaic pattern.

SLIM

The picture is expanded vertically.

TRAIL

The subject being recorded creates a trail when in motion.

STRETCH

The picture is expanded horizontally.

MAGICPIX (Not available during playback)
Color recording of video or still images onto the Mini DV in low lighting. (See page 43.)

• Only Manual Focus is available.

WIPE

Successive scenes are separated in a way which simulates the drawing of a curtain.

MIX

The current scene is mixed in with the following scene during scene changes.

PinP

PinP (Still image) is displayed on the Main Picture.

SEPIA (Only available during playback)
The picture is played back in sepia, a brownish color, giving it an antique look.

MONO (Monotone) (Only available during playback)

The picture is played back in black-and-white.

1

Set **POWER** to **CAMERA** or **VCR**.

- The **POWER** lamp lights red.
- Be sure **POWER** is fully turned to **CAMERA** or **VCR** position.

2

Press **MENU** to display the menu screen.

3

Rotate **JOG KEY** to select **D.FUNCTION** in the **CAMERA** mode menu screen or **PLAY/FUNCTION** in the **VCR** mode menu screen, then press **JOG KEY** to display the **CAMERA FUNCTION** or **VCR PLAY FUNCTION** menu screen.

4

Rotate **JOG KEY** to select **D.FUNCTION**, and then press **JOG KEY** repeatedly to select one of the Digital Functions listed on the left.

5

To cancel the Digital Function, press **JOG KEY** repeatedly to select **OFF**.

Note

- The **EIS** and **Digital Zoom** features are turned off automatically when one of the Digital Functions listed at left is selected.

To use the WIPE function

- In Camera mode, set the "D.FUNCTION" item in the main menu screen to "WIPE". (See page 15.)
- Press **REC/PAUSE** to start recording.
- Press **REC/PAUSE** to pause the recording. The last scene will be memorized.
- Press **RECORD/PAUSE** to start recording again. The new scene will take the place of the memorized scene.

To use the MIX function

- In Camera mode, set the "D.FUNCTION" item in the main menu screen to "MIX" (see page 15). Then, perform steps b-d above.

The memorized scene and the new scene will appear mixed as the scene changes from one to the other.

Note

- When **Photo Title** is set, **WIPE/MIX** mode becomes **Photo Title**. When **Photo Title** is finished, Digital Function turns **OFF**.

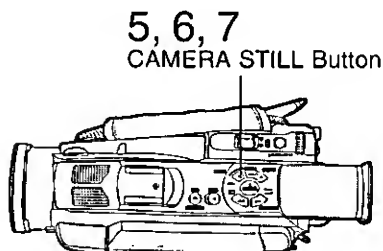
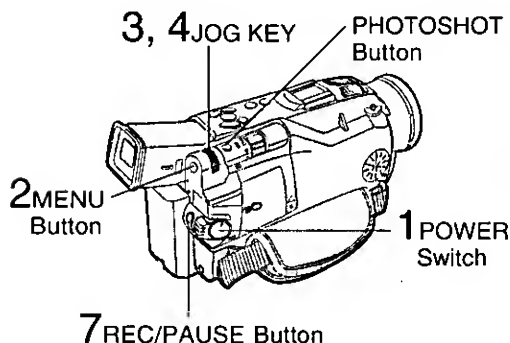
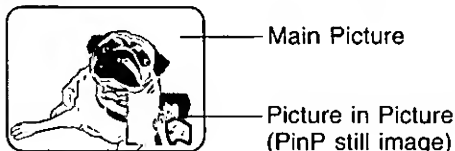
Special Features

Picture in Picture (PinP)

You can display a PinP (still image) screen on the Main Picture.

Note

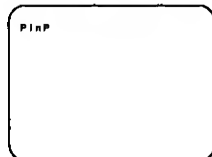
- PinP position is fixed at the bottom right of the screen.



Before you begin

- Connect the Palmcorder to a power source. (See pages 11, 12.)

- Set POWER to CAMERA.**
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to CAMERA position.
- Press MENU** to display the menu screen.
- Rotate JOG KEY repeatedly** to select **FUNCTION**, then **press JOG KEY** to display the CAMERA FUNCTION menu screen.
- Press JOG KEY** to select **PinP**.
 - Press MENU twice** to exit this menu.
 - "PinP" will appear in the EVF or the LCD monitor.



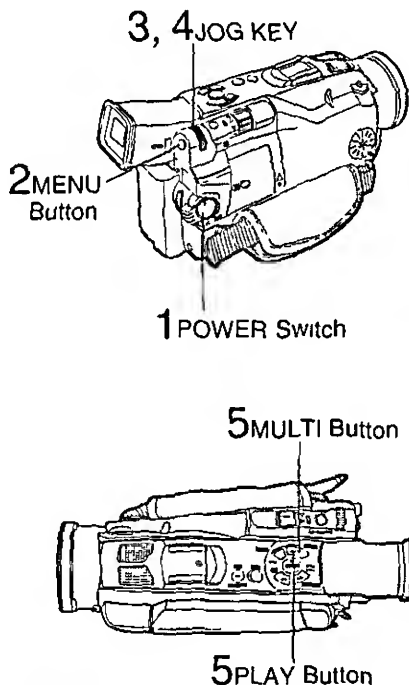
- Aim at the scene you wish to place as PinP**, then **press II (CAMERA STILL)** to freeze the image.
- Press II (CAMERA STILL) again** to place the frozen image as PinP.



- Press REC/PAUSE** to record a scene with PinP image.
 - Press PHOTOSHOT** to record a scene with PinP image in PhotoShot mode.
 - Press II (CAMERA STILL) again** to remove PinP image.

Strobe Multi Mode

In Strobe Multi Mode, you can select the rate at which a succession of still screens are captured from the playback picture



Note

- A Multi Image Playback screen cannot be output from the DV terminal or Digital Still Image terminal
- A Multi screen will have slightly lower image quality

Before you begin

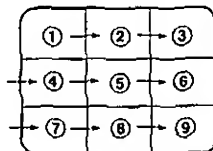
- Connect the Palmcorder to a power source (See pages 11, 12)

- 1 Set **POWER** to **VCR**
 - The **POWER** lamp lights red
 - Be sure **POWER** is fully turned to **VCR** position
- 2 Press **MENU** to display the menu screen
- 3 Rotate and press **JOG KEY** to select and set **MULTISETTING**
- 4 Press **JOG KEY** repeatedly to set desired speed

Strobe Speeds

Strobe Speeds 9 screen capture time	
FAST	Every 0.3 seconds
NORM	Every 0.6 seconds
SLOW	Every 1.0 seconds

- Press **MENU** twice to exit
- 5 Press **▶ (PLAY)** to start playback
Press **▶ (MULTI)** at the point you want to start capturing
 - A succession of 9 screens will be captured, and playback will stop



- Press **▶ (PLAY)** to start playback
Press **■ (STOP)** to stop playback

Special Features

AutoFocus

The Palmcorder automatically adjusts the focus over the entire zoom range.

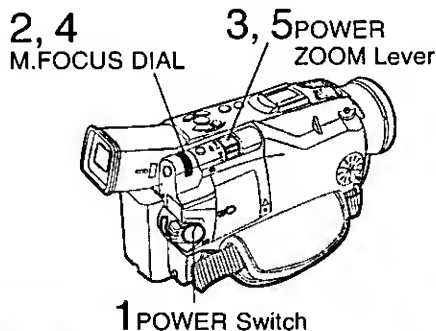
Manual Focus

Use Manual Focus (MF) when recording ...

- a subject through glass.
- a scene where the subject is far from the Palmcorder and there are objects in the foreground.
- a subject with distinct horizontal stripes.
- a subject not centered in the Viewfinder.
- subjects with shiny surfaces.
- an obliquely angled subject.
- a bright, flat subject such as a white wall.
- in low light situations.
- a scene with fast motions, like a golf swing.

Re-focusing may be required

- when your Palmcorder is aimed at a new scene.



- 1 Set POWER to CAMERA.**
 - The POWER lamp lights red.
 - Be sure POWER is fully turned to CAMERA position.
- 2 Press M.FOCUS DIAL** so that "MF" (Manual Focus) appears in the EVF or the LCD monitor.
- 3 Press and hold POWER ZOOM "T" side (Telephoto)** until the lens is at maximum zoom in.
- 4 Turn M.FOCUS DIAL** until the picture is in focus.
 - It may be necessary to back away from the subject to focus the image properly.
- 5 Press POWER ZOOM to "W" or "T" as desired.**
 - The subject will remain in focus over the entire zooming range.
 - It may be necessary to back away from the subject to focus the image properly.

Note

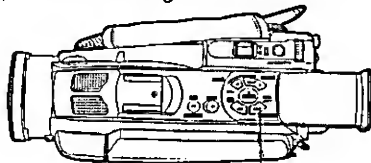
- DISPLAY must be set to on for MF, AE, W.BALANCE, or BACK LIGHT to be displayed on the LCD or EVF.

Macro Focus (for close-ups)

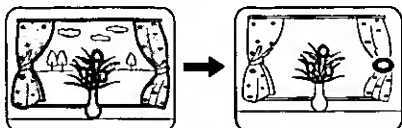
Press the "W" side of POWER ZOOM to the maximum wide angle position. Auto Focus will function with the subject as close as 1 inch (25 mm) in front of the lens.

Backlight

Use when recording a subject that is darker than the surrounding scene, in a shadowed area, or when the light source is in back of your subject.



BACK LIGHT Button



EVF or LCD monitor indication.

Press **BACK LIGHT** in Record mode to activate the Backlight feature.

The Indicator "●" will appear in the EVF or LCD monitor.

Press **BACK LIGHT** again to cancel the Backlight feature.

Note

- The Indicator "●" will not appear in the EVF or LCD monitor when OFF is selected in the DISPLAY menu.

High Speed Shutter

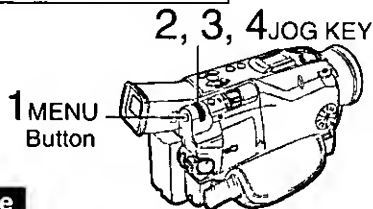
To record high speed motion (e.g. tennis stroke) for improved STILL or SLOW MOTION playback when watching the tape on this Palmcorder

Auto Shutter

In the AUTO mode (no indication in the EVF and LCD monitor), the Palmcorder will automatically adjust the shutter speed (up to 1/350)

- AUTO mode is automatically selected whenever the POWER Switch is set to CAMERA

Manual Selection

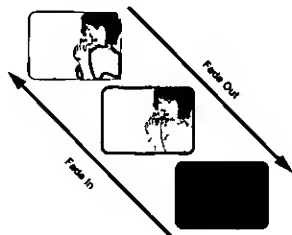
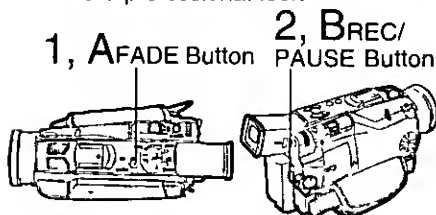


Note

- For proper color reproduction, it is recommended that you use this feature outdoors. For indoor High Speed Shutter recording, additional halogen or tungsten light should be provided. Fluorescent light will degrade the picture quality.
- This feature requires ample light. More light is required for the fastest shutter speeds.
- The Auto Focus system may not operate properly in insufficient light when using the High Speed Shutter.
- When PROG AE is ON, you cannot manually select the shutter speed.
- When MAGICVU is ON, Program AE and H S S cannot be set in the menu.

Audio/Video Fade In/Out

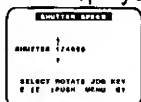
You can make smoother scene transitions for a more professional look



Before you begin

- Connect the Palmcorder to a power source (See pages 11, 12)
- Set POWER Switch to CAMERA
- Insert a cassette with record tab (See page 6)

- 1 Press **MENU** to display the Camera mode menu in the EVF or the LCD monitor
- 2 Rotate and press **JOG KEY** to select **ADJUST**, then rotate and press **JOG KEY** to select **HISIS!**
- 3 Press **JOG KEY** to select **SET**
• SHUTTER SPEED menu is displayed



- 4 Rotate **JOG KEY** to choose one of the following shutter speeds

1/100 ↔ 1/60 ↔ AUTO ↔ 1/8000 ↔ 1/4000

1/250 ↔ 1/500 ↔ 1/1000 ↔ 1/2000

- Press **MENU** three times to exit

Fade In

Starting the first scene with "fade in" is very effective

- 1 In REC/PAUSE mode, hold down **FADE** until the picture fades out
- 2 Press **REC/PAUSE** to start recording
- 3 Release **FADE** and the picture will gradually fade in

Fade Out

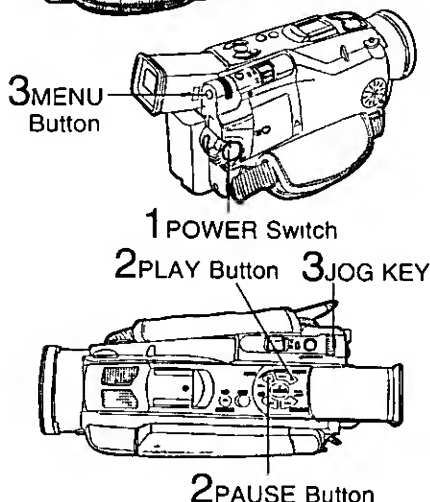
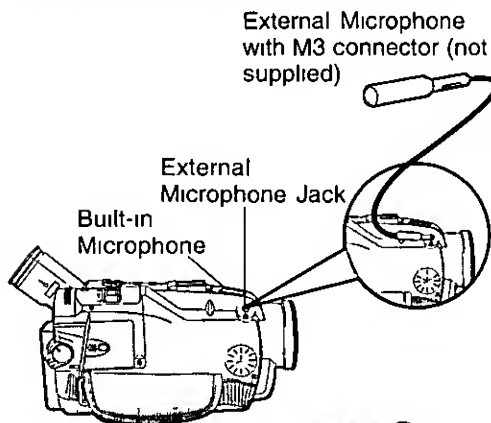
Use to create a soft ending or (together with fade in) for a soft transition from one scene to the next

- A During recording, hold down **FADE** until the picture fades out
- B Press **REC/PAUSE** to pause the recording

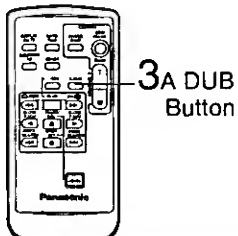
Special Features

Audio Dubbing using the External or Built-in Microphone

The original sound can be replaced with new sound using the built-in Palmcorder microphone or an external microphone



PV-DV701 Supplied
PV-DV351 Optional



Before you begin

- Connect the external Microphone (if used)
- Turn on the Palmcorder
- Insert a pre-recorded tape to be dubbed

The AUDIO-REC setting in CAMERA MENU mode should be as follows

12 bit	The original sound is recorded on ST (Stereo) 1, and the new sound will be recorded on ST (Stereo) 2
16 bit	The original sound is replaced with the new sound

- Select 12 bit if you do not want the original sound to be completely replaced during an audio dub
- If you dub over a tape which has both 12 bit and 16 bit audio recordings on it, keep in mind that the original 16 bit audio portion will be completely replaced

1 Set POWER to VCR

- The POWER lamp lights red
- Be sure POWER is fully turned to VCR position
- With the Remote Control, you can set the Palmcorder to stop automatically at a specified point on the tape. See "Memory-Stop Editing" on page 51

2 Press ► (PLAY) Then press II (PAUSE) where you want dubbing to begin

When using the Palmcorder only

3 Press MENU to display the VCR mode menu screen

Rotate JOG KEY to select **REC MODE**, then press JOG KEY to display the VCR REC MODE menu screen

Rotate JOG KEY to select **AUDIO DUB**, and then press JOG KEY to select ON

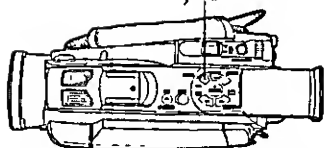
- The Palmcorder will go to Stand By mode, and "A DUB" flashes in the EVF or the LCD monitor. Go to step 4

When using the Remote Control only

3 Press A DUB on the Remote Control

- The Palmcorder will go to Stand By mode, and "A DUB" flashes in the EVF or the LCD monitor. Go to step 4

4, 5 PAUSE Button



To listen to the desired audio sound, set the AUDIO setting of the VCR mode MENU (see page 17) as follows

AUDIO The following selections are available for 12 bit AUDIO dubbed recordings only (sound recorded in SP mode only)

ST 1	Set this position to listen to the original sound
ST 2	Set this position to listen to the audio dubbed sound
MIX	Set this position to listen to both the original sound and the audio dubbed sound

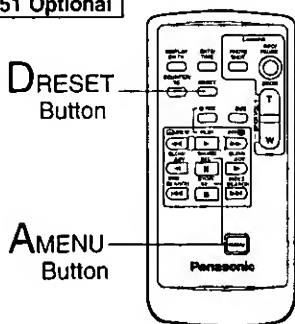
Note

- 16 bit dubbed sound completely erases the original 16 bit recorded sound
- If you dubbed using 12 bit AUDIO recording and then selected AUDIO-MIX in the menu for playback, the sound will be stereo regardless of the AUDIO-OUT setting
- If you recorded in LP mode, you cannot use the A DUB feature

Memory-Stop Editing (Remote Control Only)

You can set an automatic Dubbing stop point

PV-DV701 Supplied
PV-DV351 Optional



4 Press **II (PAUSE)** to start Audio Dubbing

- Connect the Palmcorder to the TV in order to monitor the sound (See page 31)



Only NTSC (National Television Standards Committee) recorded tapes can be audio dubbed. The following screen appears if the tape was not recorded in NTSC format

5 Press **II (PAUSE)** to stop Audio Dubbing

- If the microphone used for dubbing gets too near the speaker of your TV, a howling noise (feedback) may occur
- If the tape position is in or was started in a blank section, you cannot use the A DUB feature

A Press **MENU** to display the VCR menu screen

B Rotate **JOG KEY** to select **DISPLAY SETTING**, and then press **JOG KEY** to display the DISPLAY SETTING menu

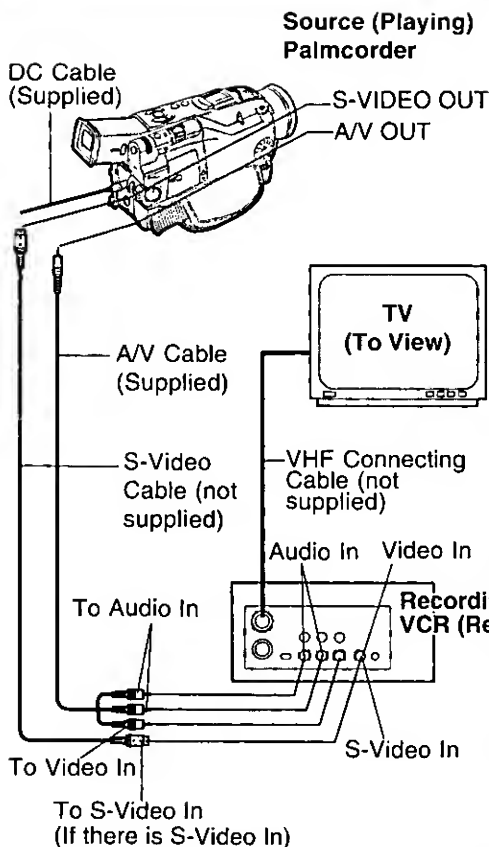
C Rotate **JOG KEY** to select **DISPLAY**, and then press **JOG KEY** to set to **MEMORY**

D Press **MENU** two times to exit MENU mode. Then, press **RESET** on the remote control to reset the Counter Memory to M 0 00 00

Now, rewind to the editing start point, and continue with steps 2-5. The tape will now stop automatically at "M 0 00 00"

Special Features

Copying your Tapes to S-VHS or VHS Cassette



Monitor with your TV

- Turn the TV ON and select its VCR channel (either CH3 or CH4).
- Set the VCR/TV Selector on the recording VCR to VCR.

Before you begin

- Connect both Palmcorder and VCR to their power sources.
- Connect the Palmcorder to a VCR as illustrated left.
- Turn ON both units.
- **Set the recording VCR's Input Signal Selector to LINE.**
- Set the Palmcorder POWER Switch to VCR.
- Before using S-VIDEO Connector, insert the DC Cable into the DC IN Terminal. (See page 12.)

- 1 Insert a pre-recorded tape** into the source (playing) Palmcorder and a blank tape, with record tab in place, into the target VCR (Recorder).

Note

• For PV-DV701 users:

To use S-VIDEO OUT and A/V OUT Connectors, first set to AV-JACK "OUT/PHONES" in the VCR Mode Menu. (See page 17.)

- 2 Press ► (PLAY)** on the Palmcorder. When the tape reaches the point you want to start dubbing, **press PAUSE**.

- 3 Place the VCR into REC/PAUSE mode.** (See VCR manual.)

- 4 Simultaneously, press PAUSE** on both units to begin copying.

- 5 Press STOP** on both units when copying is completed.

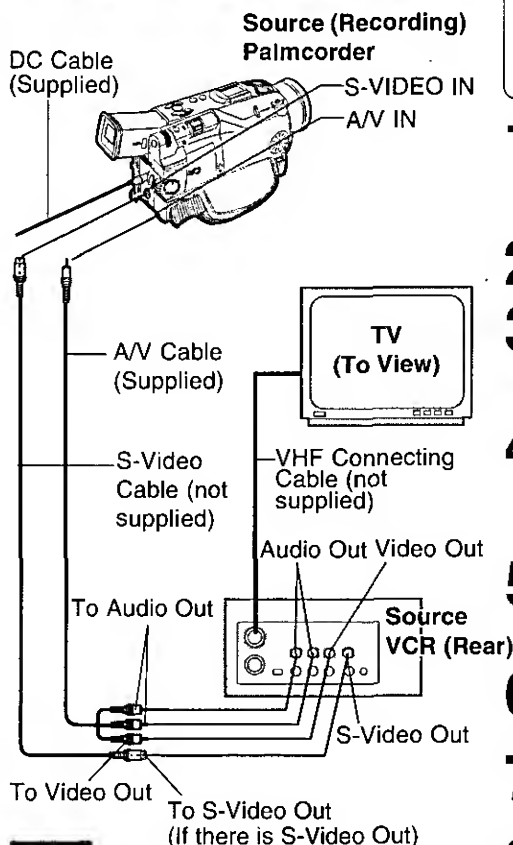
Note

- For technical reasons, dubbing a tape may reduce its quality.
- Press DISPLAY ON TV on the Palmcorder remote control to eliminate EVF/LCD Monitor indications.
- If the Time Code is displayed in the EVF or LCD monitor, it cannot be reset.
- Only the DATE/TIME, when displayed, will be recorded on the tape.

CAUTION:

Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

Copying S-VHS or VHS Cassette to your Tapes (PV-DV701 only)



Note

- OSD functions are not displayed on the TV monitor.
- Do not connect A/V with S-Video on a different unit. The picture and sound may be abnormal.
- If both S-Video Cable and A/V Cable are used, the picture will come from the S-Video Cable.
- Do not connect the A/V Cable and S-Video Cable to other devices.
- If a recording is made at the VCR while the counter is displayed, it cannot be reset.
- Depending on the input signal, the closed caption signal may not be able to be recorded normally.

Before you begin

- Connect both Palmcorder and VCR to their power sources.
- Connect the Palmcorder to a VCR as illustrated left.
- Turn ON both units.
- Before using S-VIDEO Connector, insert the DC Cable into the DC IN Terminal. (See page 12.)

- 1 Insert a pre-recorded tape into the source (playing) VCR and a blank tape with recorded tab closed in place into Palmcorder.
- 2 Press **MENU** to display VCR MENU screen.
- 3 Rotate **JOG KEY** to select **REC MODE**, then press **JOG KEY** to display the VCR REC MODE menu screen.
- 4 Rotate **JOG KEY** to select **AV-JACK**, then press **JOG KEY** to set to IN.
 - "LINE-IN" is displayed on the EVF and LCD monitor. (See page 20.)
- 5 Press **PLAY** on the VCR. When the tape reaches the point you want to start dubbing, press **PAUSE**.
- 6 Hold down **• (REC)** and **▶ (PLAY)** and then pause the Palmcorder.
- 7 Simultaneously, press **II (PAUSE)** on both units to begin copying.
- 8 Press **■ (STOP)** on both units when copying is completed.

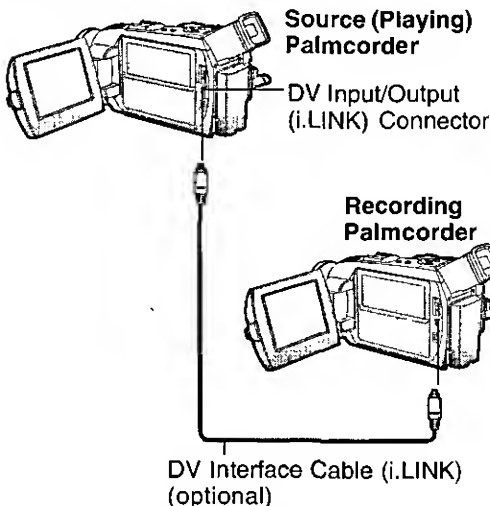
CAUTION:

Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

Special Features

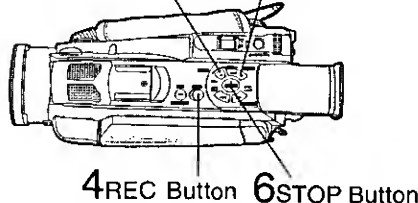
Copying from Digital Equipment (dubbing)

High quality digital-to-digital copying can be accomplished if both Palmcorders incorporate the DV Input/Output (i.LINK) Connector (DV interface cable (i.LINK) is not supplied).

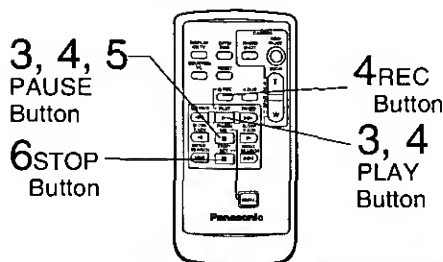


3, 4, 5 PAUSE Button

3, 4 PLAY Button



PV-DV701: Supplied
PV-DV351: Optional



Before you begin

- Connect both Palmcorders to their power sources.
- Connect the two Palmcorders using the DV interface cable (i.LINK) (4-pin to 4-pin).
- Turn both Palmcorders ON.

1 Insert a pre-recorded tape into the source (playing) Palmcorder, and set **POWER** to **VCR**.

2 Insert a blank tape with the record tab closed into the target (recording) Palmcorder and set **POWER** to **VCR**.

Note

- For PV-DV701 users:
To use the Recording Palmcorder, first set to AV-JACK "OUT/PHONES" in the VCR Mode Menu. (See page 17.)

3 Press **▶ (PLAY)** on the source Palmcorder. When the tape reaches the point you want to start dubbing, press **II (PAUSE)**.

4 Hold down **REC** and press **▶ (PLAY)** on the target (recording) Palmcorder or on the remote control.
Press II (PAUSE) to pause the tape at the starting point of the dub.

5 Simultaneously, press **II (PAUSE)** on both units to begin dubbing.

6 Press **■ (STOP)** on the recording unit, and then press **■ (STOP)** on the playing unit to end dubbing.

Note

- When two Palmcorders are used for dubbing, it is recommended that the remote control VCR1 or VCR2 setting be used to avoid improper-operation.
- When two Palmcorders are connected using the DV interface cable (i.LINK) (not supplied), a Video Editing Controller cannot be used.
- Do not connect both an S-Video Cable or AV Cable and a DV Interface Cable (i.LINK).

CAUTION:

Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

Transferring Your Images

You can transfer images from your Palmcorder tape to your PC (Personal Computer)

System Requirements

- IBM PC/AT or compatible
- Intel Pentium II Processor 266 MHz or more
- RAM 64 MB or more
- CD-ROM drive (for installation)
- Mouse or other pointing device
- Windows 98/Me/2000 preinstalled PC with USB port (for CARDLINK (for USB), PHOTOVU LINK/Movie Messenger, or Palmcorder USB Device Driver)
- Windows 95/98/Me/2000 preinstalled PC with USB port (for ArcSoft Software)
- 15 MB minimum available hard disk space (for CARDLINK (for USB), PHOTOVU LINK/Movie Messenger, or Palmcorder USB Device Driver)
- 220 MB minimum available hard disk space (for ArcSoft Software)
- Minimum 120 MB of free hard disk space for Motion picture transfer from DV tape to PC
- Video card that supports 16 bit color at 800 X 600 monitor resolution
- High color (16 bit) or more (for ArcSoft Software)

Palmcorder USB Device Driver

Software to connect your Palmcorder and your PC using USB Cable

PHOTOVU LINK/Movie Messenger

Software to transfer images from your Palmcorder to your PC

CARD LINK (for USB)

This software to transfer images between the Memory Card and your PC

ArcSoft Software*

Following software is included PhotoPrinter 2000 Pro, PhotoImpression 2000, Panorama Maker 2000

* For information on ArcSoft Software

TEL 1-510-440-9901
FAX 1-510-440-1270

Web Site www.arcsoft.com
E-mail support@arcsoft.com

Software Installation (Windows 98/Me/2000)

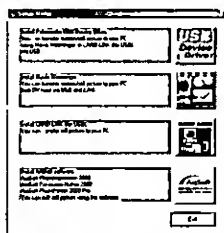
Caution

- Please install Palmcorder USB Device Driver first before connecting the Palmcorder and your PC using USB Cable. Once Palmcorder USB Device Driver is installed, you must restart your computer for installation to take effect

1 Turn on the PC (Personal Computer) and start up Windows 98/Me/2000

2 Insert the supplied Software CD-ROM into the CD-ROM drive

3 Select and click the icon you want to install. Please install the USB Device Driver first and follow the instructions listed under "Caution"



4 Follow the instructions as they appear on your PC screen

Palmcorder USB Device Driver

Click



PHOTOVU LINK/Movie Messenger

Click



CARD LINK (for USB)

Click



ArcSoft Software

Click



Note

- If a window does not appear automatically, click the "Start" button on your desktop and then click "Run". When the Run box is open, type in "D:\InstMenu.exe" where "D" is the drive letter of your CD, then click "OK".
- If you attempt to install the next Software before the previous Software installation is completed, "Error" may appear. In this case, click [OK] and install the next Software from the menu.

Transferring Your Images

Notes on PHOTOVU LINK/Movie Messenger and CARD LINK (for USB) operation

- For PHOTOVU LINK/Movie Messenger, do not connect the i.LINK and USB terminals to the Palmcorder at the same time.
- Make sure Palmcorder power is not shut off during use, your PC system may become unstable, therefore it is recommended that the AC Adaptor be used as the power source. (Be especially careful when recording in M-CARD or CAMERA mode as the power eventually shuts off automatically if a tape is inserted.)
- For PHOTOVU LINK/Movie Messenger, if the play, stop, fast forward, and rewind functions are operated using the Palmcorder buttons, the image may not be captured properly. Use Palmcorder Operation Buttons displayed on the PC screen.

Uninstalling Application Software

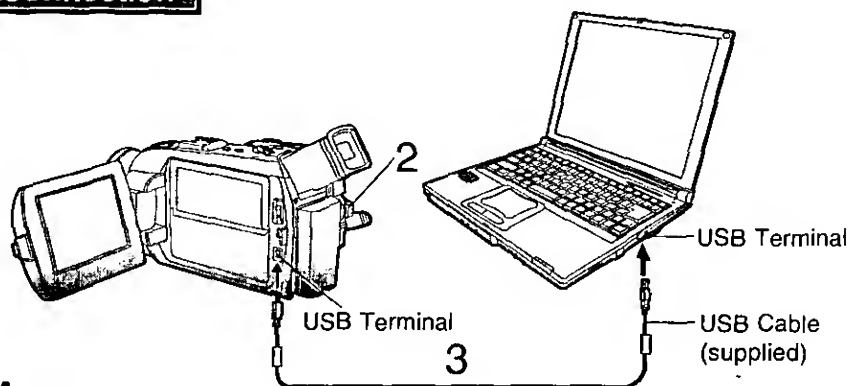
- 1 Click "Start," "Settings," and "Control Panel."
- 2 Double-click on "Add/Remove Programs" in the "Control Panel."
- 3 Select the application software you want to remove, and then click [Add/Remove].

Note

- Before uninstalling CARD LINK (for USB), right-click on the CARD LINK (for USB) Monitor, then left-click on "Exit" to close CARD LINK (for USB) Monitor.
- If the "Locked File Detected" dialog box appears while uninstalling the CARD LINK (for USB), close CARD LINK (for USB) Monitor as described above, then click on [Retry].



Connection



- 1 Turn on your PC.
- 2 Set the Palmcorder POWER to VCR.
- 3 Connect the Palmcorder to your PC (Windows) using the USB Cable (supplied).

Note

- For extended use, it is recommended to use the AC Adaptor as a power source.

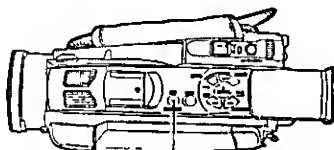
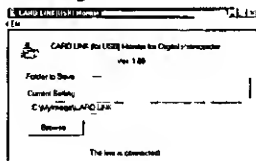
Transferring Your Images

One Touch Transfer

The images stored on the Memory Card can easily be transferred to the PC by pressing the TRANSFER Button

Note

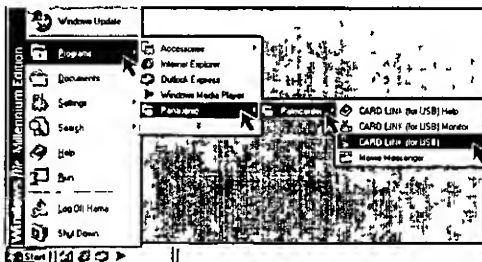
- Before using this feature, make sure the CARD LINK (for USB) monitor icon is displayed
- Double clicking the CARD LINK Monitor icon displays a dialog box in which the save location for the collective transfer can be changed



3 TRANSFER Button

Running the CARD LINK (for USB)

You can transfer images between the Memory Card and your PC



While CARD LINK (for USB) is running, do not perform the following operations...

The PC system may become unstable

- Change the screen area or color pallet in the Display Properties window
- Turn the Palmcorder power switch ON or OFF while connecting the Palmcorder to your PC using the USB Cable
- Connect/disconnect the USB Cable
- Insert/remove a Memory Card

Before you begin

- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)
- Turn your PC on

- 1 Set Palmcorder POWER to CAMERA or slide M-CARD Lock Switch to unlock and set to M-CARD (See pages 9, 10)
- 2 Connect the Palmcorder to your PC (Windows) using the USB Cable (supplied) (See page 56)
 - "CONNECT WITH PC" is displayed on the LCD monitor
- 3 Press TRANSFER
 - The CARD LINK (for USB) driver will automatically open and the images stored on the Memory Card will be transferred to your PC (If an image to be transferred already exists, that image will be skipped over and not transferred)

Note

- JPEG image format (only image data that can be played back on Palmcorder) can be transferred from the Palmcorder to the PC

- 1 Repeat steps 1 and 2 above
- 2 Click on "Start," "Programs," "Panasonic," "Palmcorder," then "CARD LINK (for USB)"
- 3 "CARD LINK (for USB)" is opened

Note

Refer to Help for information about application operations and Error messages

Special Features

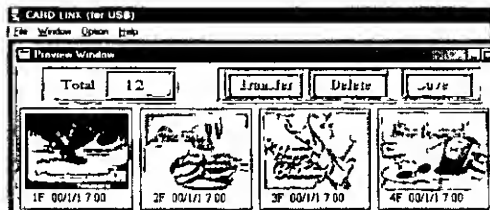
Transferring Your Images

Using Memory Card Image Data (CARD LINK (for USB))

Pictures captured with Palmcorder can be transferred to your PC

Before you begin

- Set POWER to OFF before inserting a recorded Memory Card (See pages 32, 33)
- Make Palmcorder-PC connections (See page 56)
- Turn your PC on (See page 56)
- Set Palmcorder POWER to M-CARD (See page 10)
- Repeat steps 1 and 2 to run the CARD LINK (for USB) (See "Running the CARD LINK (for USB)" on page 57)

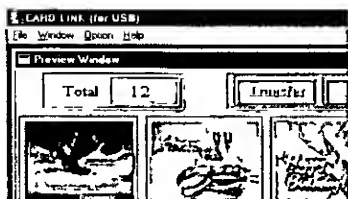


Note

- If, while transferring the image to your PC, the displayed picture appears abnormal, restart the PC application and turn Palmcorder POWER off, and then back on

Using PC Image Data (CARD LINK (for USB))

You can use JPEG or Bitmap files from your computer for Photo Title (see page 38) by transferring them to the Palmcorder via PC connection



- 1 Select the image data you want to transfer to your PC
 - The selected image will be underlined in green

2 Click on Transfer

- The picture image is transferred to your PC and displayed. Transfer Dialog will appear on the PC. The image is captured when the full screen image appears on the PC

Delete

- Confirmation Dialog will appear on the PC. Click "OK". The selected images of the Memory Card are deleted

Save

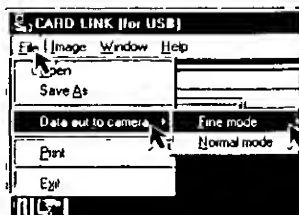
- The picture image is transferred to your PC and displayed. [Save as] dialog box will appear

- 1 Click on "File," then Click on "Open"

- At your PC, please select and open the data (jpg or bmp) you want to transfer to the Palmcorder

- 2 Click on "File," select "Data out to camera," then select Fine or Normal mode

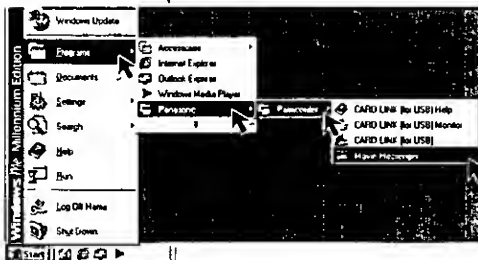
- Your computer image data is transferred to the Palmcorder



Transferring Your Images

Running the PHOTOVU LINK/Movie Messenger*

- * **PHOTOVU LINK** You can transfer Still images from your Palmcorder tape to a PC
- Movie Messenger™ System**
You can transfer Motion images from your Palmcorder tape to a PC



Before you begin

- Insert a recorded tape (See page 9)

- 1** Set Palmcorder **POWER** to **VCR**
- 2** Connect the Palmcorder to your PC using the USB Cable (supplied) or DV interface Cable (i.LINK)
(See pages 56, 64)
- 3** Click on "Start," "Programs," "Panasonic," "Palmcorder," then "Movie Messenger"

- 4** "PHOTOVU LINK/Movie Messenger" is opened

Note

Refer to Help for information about application operations and Error messages

How to insert the USB Cable or DV Interface Cable (i.LINK)

- A** Set Palmcorder **POWER** to **VCR**
- B** Connect the Palmcorder to your PC using the USB Cable (supplied) or DV interface Cable (i.LINK)
- C** Start up the PHOTOVU LINK/Movie Messenger

How to remove the USB Cable or DV Interface Cable (i.LINK)

- A** Close the PHOTOVU LINK/Movie Messenger
- B** Remove the USB Cable or DV Interface Cable (i.LINK) from the Palmcorder
- C** Set Palmcorder **POWER** to **OFF**

While PHOTOVU LINK/Movie Messenger is running, do not perform the following operations.

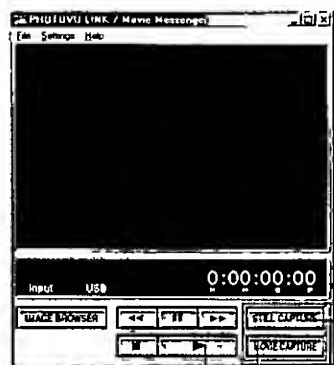
The PC system may become unstable

- Change the screen area or color pallet in the Display Properties window
- Turn the Palmcorder power switch ON or OFF while connecting the Palmcorder to your PC using the USB Cable or DV Interface Cable (i.LINK)
- Change the Palmcorder mode (VCR/CAMERA)
 - *Close the application before changing the Palmcorder power switch
- Connect/disconnect the DV Interface Cable (i.LINK)
- Connect/disconnect the USB Cable

Transferring Your Images

Using Tape Image Data (PHOTOVU LINK/Movie Messenger) (USB)

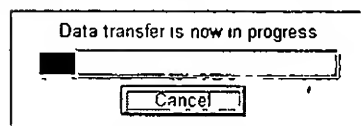
By connecting the Palmcorder and PC with the USB Cable, you can transfer Motion images and Still images saved on the DV Tape directly to your PC



2 PLAY Button

3 STILL
CAPTURE

3 MOVIE
CAPTURE



To capture Still images

- 3** Click on [STILL CAPTURE] at the point you wish to capture an image
- Repeat step 3 to continue capturing images
 - Captured Still images are saved to the PC, and you can playback the saved images on the Image Browser (See page 61)

Before you begin

- Insert a recorded tape (See page 9)
- Make Palmcorder-PC connections (See page 56)
- Turn your PC on (See page 56)
- Set Palmcorder POWER to VCR

- 1** Repeat steps 1~4 on page 59 to run the PHOTOVU LINK/Movie Messenger

Note

- When the USB Cable is connected, the input display will automatically become USB. If it is not USB, please confirm the connection. Then, close and restart the software

- 2** Click ► (PLAY) on PC screen to playback the DV tape
- The playback screen cannot be viewed on the PC. Please use the LCD monitor on the Palmcorder for confirmation

To capture Motion images

- 3** Click on [MOVIE CAPTURE] at the start point you wish to capture a Motion image
- 4** Click [MOVIE CAPTURE] or [STOP] to end capture
- "Now Searching" is displayed
 - The DV Tape is rewound to the point at which the capture was started. The Motion image is then transferred to the PC
 - "Data transfer is now in progress" is displayed on the PC screen
 - The maximum capture time is approx 30 seconds. Capture stops automatically at the end of 30 seconds

Note

- Motion images cannot be captured if data contains the following
 - A change between 12 bit and 16 bit
 - A change between SP and LP mode
- During transfer to the PC, the Motion images will not be displayed on the PC screen
- Transfer takes from about 30 to 50 seconds for every 1 second of the Motion image when using USB connection

- 5** To capture other Motion images, repeat steps 3~4

Transferring Your Images

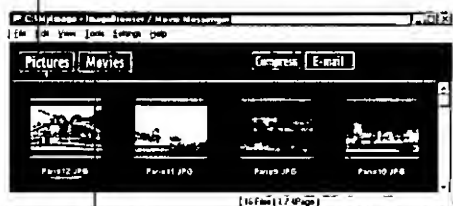
Playing back the saved Motion and Still images (PHOTOVU LINK/Movie Messenger)

You can play back the saved Motion images and Still images (see page 60) for confirmation

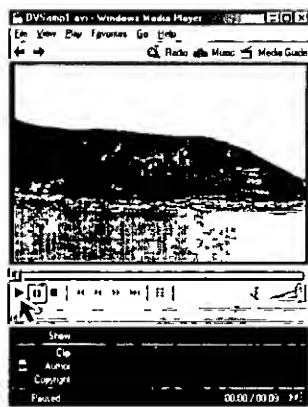


2 IMAGE BROWSER

3 Pictures



3 Movies



1 Repeat steps 1~4 on page 59 to run the PHOTOVU LINK/Movie Messenger

2 Click [IMAGE BROWSER] to display the Image Browser screen

To view Motion images

3 Click on [Movies]

- The first part of each Motion image will be displayed as a list

4 Double click on the desired Motion image to display the playback screen

- Click ► to start Motion image playback

To view Still images

3 Click on [Pictures] to display the Still image list

4 Double Click on the desired image to open it

Note

- If the image cannot be opened, please refer to the software Help menu

Transferring Your Images

To select the e-mail Software (PHOTOVU LINK/Movie Messenger)

You can transfer and compress your Motion images and Still images as attachments to your e-mail easily

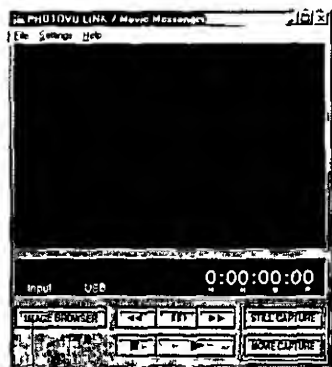
Note

The e-mail Software must support MAPI (Messaging Application Programming Interface)

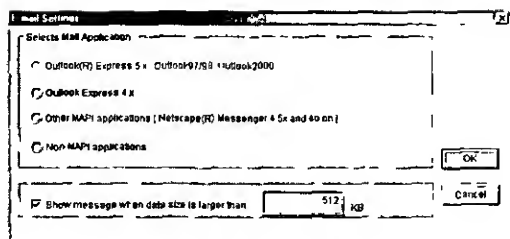
Below are some e-mail Software programs which support MAPI

Microsoft Outlook, Microsoft Outlook Express, Netscape Messenger

- Outlook(R) Express 5x, Outlook97, Outlook98, Outlook2000
- Outlook Express 4x
- Other MAPI applications [Netscape(R) Messenger 4 5x and so on]



2 IMAGE BROWSER



Before you begin

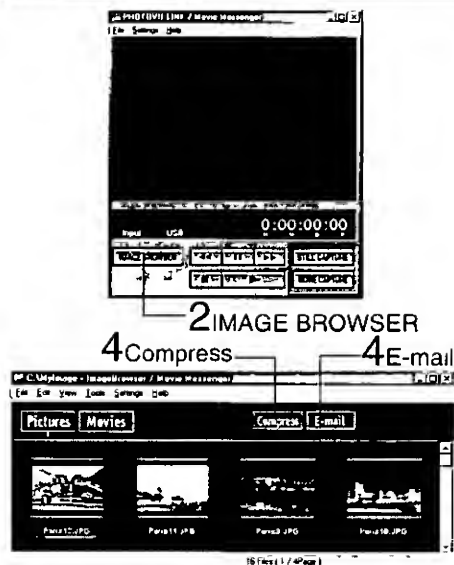
- Insert a recorded tape (See page 9)
- Make Palmcorder-PC connections (See page 56)
- Turn your PC on (See page 56)
- Set Palmcorder POWER to VCR

- 1 Repeat steps 1~4 on page 59 to run the PHOTOVU LINK/Movie Messenger (See Note below)
- 2 Click [IMAGE BROWSER] to display the Image Browser screen
- 3 Select "E-mail Settings" from "Settings"
- 4 Select the e-mail software you are using, then click [OK]

Note

- If the e-mail software does not support MAPI, clicking on [E-mail] of Movie Messenger will not automatically run the e-mail software. Please run the e-mail software before doing step 1 above

Attaching captured Motion and Still images to your e-mail



5Compress 5Play 6E-Mail

Attaching Still images to e-mail

- 3 Click on [Pictures] to display the Still image list
- 4 Select the image to be attached, then click on [E-mail].
 - The e-mail software will be run automatically and the selected image will be attached to the e-mail (See Note at right)

Before you begin

- Insert a recorded tape (See page 9)
- Make Palmcorder-PC connections (See page 56)
- Turn your PC on (See page 56)
- Set Palmcorder POWER to VCR

- 1 Repeat steps 1~4 on page 59 to run the PHOTOVU LINK/Movie Messenger
- 2 Click [IMAGE BROWSER] to display the Image Browser screen

Attaching Motion images to e-mail

- 3 Click on [Movies] to display a Motion image list
- 4 Select the Motion image to be attached, then click on [Compress]
 - Follow the menu to perform the compression settings
- 5 Clicking on [Compress] will compress the selected image
 - "Successfully Done" is displayed on the PC screen
 - Click [Play] to open the Movie Messenger Player screen. You can confirm the compressed Motion image by clicking on [Play]
- 6 Clicking on [E-Mail] will automatically attach the compressed Motion image to your e-mail (See Note below)
 - When the recipient opens the file you sent, this Movie Messenger Player screen appears. By clicking [Play], they can view the Motion Image

Movie Messenger Player screen



Note

- Movie Messenger Player works with Windows 95, 98, Me, or 2000 only
- If your e-mail software is not supported by MAPI, pressing the [E-Mail] button will automatically open the folder containing the compressed file. To attach, drag and drop the file into your e-mail

Transferring Your Images (i:LINK)

PC Connection with DV Interface Cable (i:LINK)

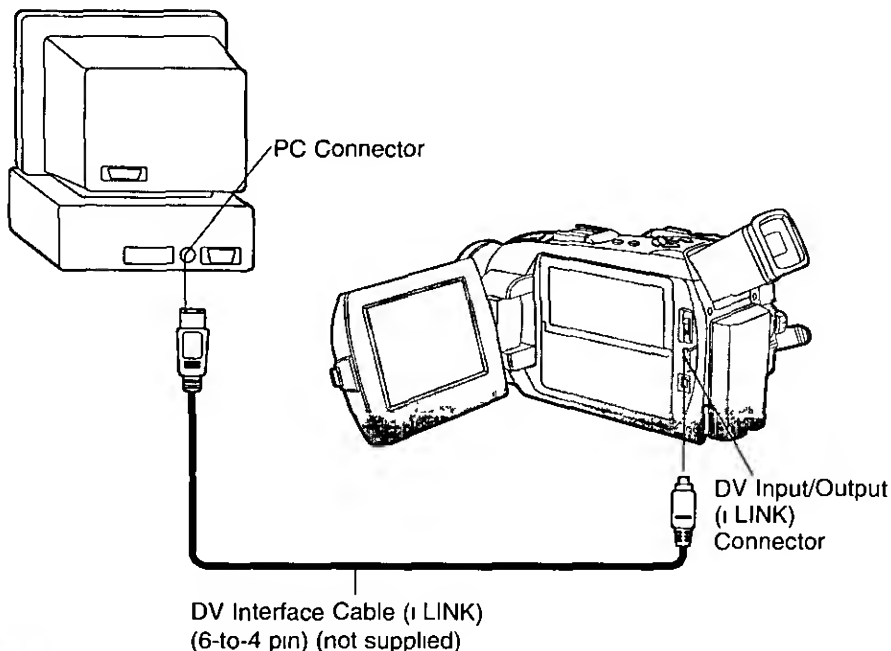
A live image can be transferred directly to your PC (Personal Computer) via a DV Interface Cable (i:LINK) (not supplied) using products and software from a number of editing software companies including Canopus and Pinnacle

Using Products from these companies allows you to capture and edit live images onto your PC using the DV interface (i:LINK)

For more detailed information regarding editing software products from these companies, please visit their websites at

www.justedit.com

www.pinnaclesys.com



Note

- PC must be equipped with an i:LINK terminal
- During Palmcorder playback, do not disconnect the DV Interface Cable (i:LINK) or turn the Palmcorder off as this may cause PC hang-up error to occur
- For PHOTOVU LINK/Movie Messenger, do not use 2 i:LINK terminals on your PC at the same time
- PHOTOVU LINK/Movie Messenger i:LINK (DV) operates normally with Windows 98SE or later operating system
- PHOTOVU LINK/Movie Messenger i:LINK connection may not work with some DV Interface boards. In this case, use the software included with the board
- 1394 (i:LINK) interface must conform to OHCI (Open Host Controller Interface Specification)

Transferring Your Images (i.LINK)

Using Tape Image Data (PHOTOVU LINK/Movie Messenger)

By connecting the Palmcorder and PC with the DV Interface Cable (i LINK), you can transfer Motion images and still images saved on the DV Tape directly to your PC

Note

- If PHOTOVU LINK/Movie Messenger does not work, please refer to note on page 64

Before you begin

- Insert a recorded Tape (See page 9)
- Make Palmcorder-PC connections (See page 64)
- Turn your PC on
- Set Palmcorder POWER to VCR
- **Run the Software after the DV Interface Cable (i LINK) has been connected to the Palmcorder**

- 1 Repeat steps 1~4 on page 59 to run the PHOTOVU LINK/Movie Messenger**

Note

- When the DV Interface Cable (i LINK) is connected, the input display will automatically become DV. If it is not DV, please confirm the connection. Then, close and restart the software

- 2 Click ► (PLAY) button on PC screen to playback the DV tape**
 - Please use the LCD monitor on the Palmcorder or PC screen for confirmation

To capture Motion images

- 3 Click on [MOVIE CAPTURE] at the point you wish to capture a Motion image. Click on [STOP] to end capture**
 - The image is transferred to the PC in real time
 - The maximum capture time is approx 3 minutes
 - When capturing data containing changes between 12 bit and 16 bit and/or between SP and LP mode, a separate file will be made for each mode
 - Please refer to pages 61~63 for other functions

To capture Still images

- 3 Click on [STILL CAPTURE] at the point you wish to capture an image**
 - Repeat step 3 to continue capturing images
 - Captured Still images are saved to the PC, and you can playback the saved images on the Image Browser









2PLAY Button

3STILL CAPTURE

3MOVIE CAPTURE

Palmcorder Accessory System

Accessory #	Figure	Description	Price
PV-DAC11A		AC Adaptor with AC Cable and DC Cable	\$120 00
CGR-D08A/1B (Replaces CGR-D120A/1B)		800mAh / 1 h 30 min, Battery Pack	\$69 95
CGR-D16A/1B (Replaces CGR-D220A/1B)		1600mAh / 3 h, Battery Pack	\$99 95
CGP-D28A/1B		2800mAh/ 5 h, Battery Pack	\$129 95
CGR-D53A/1K (Replaces CGR-D815A/1B)		5300mAh / 9 h, Battery Pack	\$229 95
PV-DDC9		DV Interface Cable (i LINK) (4-pin to 4-pin)	\$55 00
PV-DLT9		Color Enhancement Light	\$39 95
PV-DRC9		IR Remote Control	\$29 95
PV-H150		Carrying Case	\$49 95
RP-SD064BRPA RP-SD032BRPA RP-SD016BRPA		64 MB SD Memory Card 32 MB SD Memory Card 16 MB SD Memory Card	\$109 95 \$69 95 \$49 95
BN-SDCAPU/1B		SD USB Reader/Writer (compatible with MultiMediaCard)	\$79 95
BN-SDABPU/1B		SD PCMCIA Adaptor (compatible with MultiMediaCard)	\$79 95

Palmcorder Accessory System

Concerning the Memory Card (MultiMediaCard and SD Memory Card)

- Model PV-DV351/PV-DV701 can be used with either a MultiMediaCard or a SD Memory Card
- Both of these exterior Memory Cards (MultiMediaCard and SD Memory Card) are lightweight and removable
- Both Memory Cards (MultiMediaCard and SD Memory Card) are offered in a variety of memory sizes, so you can purchase a higher capacity Memory Card if desired

Pre-recorded Titles

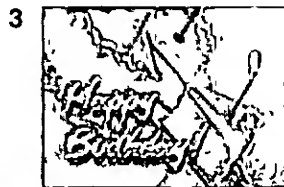
The supplied Memory Card is prerecorded with the following titles which can be inserted into a recording



Panasonic



Anniversary



Happy Birthday



Bon Voyage



Congratulations



Graduation



It's a Girl!



It's a Boy!



Our Wedding



Surprise!



The Wedding



Vacation!

Warning

- Titles can be permanently erased from the Memory Card, e.g. formatting the card or using the delete all images feature (See pages 35, 36, 37)
- If a title is erased, the remaining title numbers will change

Palmcorder Accessory Order Form

Please photocopy this form when placing an order

1 Palmcorder Model # _____

2 Items Ordered

Accessory #	Description	Price Each	Quantity	Total Price
Subtotal				
Your State & Local Sales Tax				
Shipping & Handling				6 95
Total Enclosed				

3 Method of payment (check one)

- ☐ Check of Money Order enclosed (NO C O D SHIPMENTS)
- ☐ VISA Credit Card # _____
- ☐ MasterCard Expiration Date _____
- ☐ Discover Customer Signature _____

Make Check or Money Order to PANASONIC ACCESSORIES

(Please do not send cash)

4 Shipping information (UPS delivery requires complete street address)

Ship To

Mr

Mrs

Ms _____

First

Last

Phone #

Day () _____

Street Address

Night () _____

City

State

Zip

TO OBTAIN ANY OF OUR PALMCORDER ACCESSORIES YOU CAN DO ANY OF THE FOLLOWING

VISIT YOUR LOCAL PANASONIC DEALER

OR

CALL PANASONIC'S ACCESSORY ORDER LINE AT 1-800-332-5368

[6 AM-5 PM M-F, 6 AM-10 30 AM SAT, PACIFIC TIME]

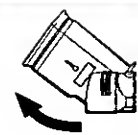
OR

MAIL THIS ORDER TO PANASONIC SERVICES COMPANY ACCESSORY ORDER OFFICE

20421 84th Avenue South Kent, WA 98032

Notes On Operations

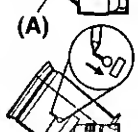
Cleaning the EVF (Electronic Viewfinder)



1 Tilt Viewfinder upward



2 Press (A) with a sharp end tip like a ball point pen or mechanical pencil and slide in direction of arrow
This opens the access hole



3 Remove any lint or dust from the access hole with canned air or other air blower



4 Press (B) with a sharp end tip like a ball point pen or mechanical pencil and slide in direction of arrow

Approximate Brightness Values

Your Palmcorder has been designed for normal scene illumination of 150 footcandles (1500 lx). However, the Palmcorder may be used at F1 1/8, if illumination is more than 0.5 footcandles (5 lx).

The table below shows the color temperature for reference

PALMCORDER SETTINGS	NATURAL LIGHT CONDITIONS	KELVIN COLOR TEMPERATURE	ARTIFICIAL LIGHT SOURCE	COLOR TINT MIXTURE
	• Fair weather, blue sky	— 10,000	• Color television	Bluish
	• Slightly cloudy sky	— 8,000		
	• Cloudy or rainy sky	— 7,000		
		— 6,500	• Fluorescent lamp (Daylight)	
	• Sunlight in clear weather at midday	— 6,000	• Camera flash bulb	
	• Average sunlight in clear weather	— 5,500		
	• Sunlight 2 hours after sunrise and before sunset	— 5,000	• Blue lamp for photography	
		— 4,500	• Fluorescent lamp (White)	Whitish
		— 4,000	• Normal flash bulb	
		— 3,500	• Fluorescent lamp (Off-white)	
	• Sunlight 40 min after sunrise and before sunset	— 3,200	• Tungsten lamp for photography	
	• Sunlight 30 min after sunrise and before sunset	— 2,800	• Halogen lamp	
			• Iodine lamp	
	• Sunlight 20 min after sunrise and before sunset	— 2,000	• Tungsten lamp	Yellowish
			• Acetylene lamp	
			• Kerosene lamp	
			• Candlelight	Reddish

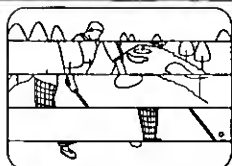
Specifications

Power Source:	Palmcorder: 7.2 V DC (Battery) 7.8 V DC (AC Adaptor) AC Adaptor: 110/120/220/240 V AC, 50/60 Hz Battery: Lithium-Ion Type DC 7.2 V
Power Consumption:	Palmcorder: 7.2 V/7.8 V DC 6.5 W (Max. 9.5 W) AC Adaptor :18 W 1 W (when not in use.)
Digital Interface	USB/i.Link (IEEE1394)
Video Signal:	EIA Standard (525 lines, 60 fields) NTSC color signal
Video Recording System:	2 rotary heads. helical scanning system
Audio:	12 bit (32 kHz) 4 tracks 16 bit (48 kHz) 2 tracks
Pick-Up System and Device:	One integral color filter Charge Coupled Device (CCD)
Lens:	10:1 zoom lens, F1:1.8 with auto iris control Focal length: 3.6 mm - 36 mm Power zoom function Lens filter diameter: 43 mm
Viewfinder:	0.44 inch (11.2 mm) Liquid Crystal Electronic Viewfinder
LCD Monitor:	2.5 inch (63.5 mm) Liquid Crystal Display (PV-DV351) 3.5 inch (88.9 mm) Liquid Crystal Display (PV-DV701)
Minimum Illumination Required:	5 lx (F1:1.8) 0.5 footcandles 0 lx (MAGICVU/0LUX ON)
Memory (Still image)	MultiMediaCard/SD Memory Card 320 x 240 pixels (NORMAL mode) 640 x 480 pixels (FINE mode)
Image Storage (supplied 8 MB Memory Card)	Approx. 210 images (NORMAL mode) Approx. 60 images (FINE mode)
Image Format	JPEG (Design Rule for Camera File System)
Operating Temperature:	32 °F~104 °F (0 °C~40 °C)
Operating Humidity:	10 %~75 %
Weight:	Palmcorder: 1.28 lbs. 0.58 kg AC Adaptor: 0.35 lbs. 0.16 kg
Dimensions:	Palmcorder: 3 (W) x 3-10/16 (H) x 7-13/16 (D) inch 76 (W) x 92 (H) x 198 (D) mm AC Adaptor: 2-3/4 (W) x 1-3/4 (H) x 4-1/2 (D) inch 70 (W) x 45 (H) x 115 (D) mm

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

Before Requesting Service

Cleaning Care for Video Heads



Clogged Video Head

(a) Video Head Cleaning Normally, your Palmcorder will not require head cleaning. However, it is possible that the heads may become clogged due to dust in the air, playing damaged tapes, long term use, etc. If "NEED HEAD CLEANING" appears for 5 seconds in the EVF or LCD monitor, the heads may require cleaning.

(b) Cleaning the Heads: It is recommended that head cleaning be performed by a qualified service technician. Please contact your nearest Panasonic Servicenter. An alternate solution is to obtain a head cleaning cassette. Please use Panasonic cleaning cassette (AY-DVMCLA). Be sure to follow the cleaning instructions carefully. Excessive use of the head cleaning cassette could shorten video head life.

Use this cassette only when a head clogging symptoms occur.

Refer servicing to qualified service personnel.

Tape Operations Caution

- When you go from function to function (PLAY, FF, REW, etc.), please note that the unit will not accept a new function operation until the previous operation is complete.
- The POWER Button and all function buttons, (PLAY, FF, REW, etc.) are only operational after the tape has been completely loaded.

Lens Hood Area Operation Caution

When the following accessories are attached and the zoom is set to maximum wide angle, the four corners of the screen may appear darker.

- Wide or Telephoto conversion lens (optional)
- A filter (optional), etc. and then the lens hood
- Two filters (optional)

Self Diagnostic System

If any of the following numbers appear on-screen, the camcorder may need service. Do not remove the battery (if attached) and write down the displayed number on page 72. Then, take the camcorder to a servicenter for repair.

Error No	Description
U11	Card Error
U12	Card Error
U13	Card Error
U14	Card/Camcorder Dialogue Error
U15	No Card Memory
U16	Captured image limit exceeded
U17	Captured image limit exceeded
U30	Error other than above

Before Requesting Service

If you have a problem with your Palmcorder, it may be something you can correct yourself. Check the list below for symptoms and corrections.

Symptom	Correction
No picture in the EVF or LCD Monitor...	<ul style="list-style-type: none">• Make sure the Power Source is connected. (pp. 11, 12)• Make sure the POWER switch is set to VCR or CAMERA. (pp. 22, 27)• Check the Dew Indicator. (p. 21)• Make sure the Battery is fully charged. (p. 11)• Make sure all necessary cables are connected correctly and firmly. (p. 12)• Make sure the Lens Cap is removed. (p. 22)
Video cassette cannot be inserted...	<ul style="list-style-type: none">• Make sure the Power Source is connected. (pp. 11, 12)• Insert the cassette record tab up, window side facing out. (p. 9)
Video cassette cannot be removed...	<ul style="list-style-type: none">• Make sure the Power source is connected. (pp. 11, 12)
No operation starts when operation buttons are pressed...	<ul style="list-style-type: none">• Check the Dew Indicator. (p. 21)
Recording cannot be done...	<ul style="list-style-type: none">• Make sure the record tab is closed. (p. 6)• Check the Battery Indication. (p. 19)
Auto Focus does not operate...	<ul style="list-style-type: none">• Make sure FOCUS is set to AUTO. (p. 47)• Make sure the unit is ON and set to CAMERA mode. (p. 22)
Sound from microphone cannot be monitored...	<ul style="list-style-type: none">• Make sure the unit is set to REC or REC/PAUSE mode.
Sound cannot be heard...	<ul style="list-style-type: none">• Make sure the Audio on the VCR MENU is set to ST1. (pp. 17, 51)

Request for Service Notice

Please photocopy this form when making a request for service notice.

Request for Service Notice:

In the unlikely event this product needs service.

- Please include your **proof of purchase**. (Failure to do so will delay your repair.)
- To further speed your repair, please provide an explanation of what is wrong with the unit and any symptom it is exhibiting.

Mail this completed form and your Proof of Purchase along with your unit to:
Panasonic Services Company
1705 N. Randall Road
Elgin, IL. 60123-7847
Attn: Camcorder Repair

Please write the displayed Self Diagnostic number here. (See page 71.)

Index of Controls

Front View

Built-in Twin Capsule 2-Way Microphone System

MAGICVU/OLUX Switch
See page 43

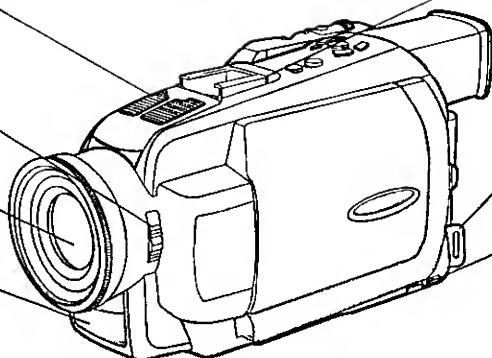
Lens

Remote Sensor
See page 25

Built-in Light Mount
See page 7

Shoulder Strap Attachment Ring
See page 8

BATT RELEASE Switch
See pages 11, 12



Side View

M-CARD EJECT Button
See page 10

POWER Switch (VCR•OFF•CAMERA•M-CARD)
See pages 9, 10

M-CARD Lock Switch
See page 32

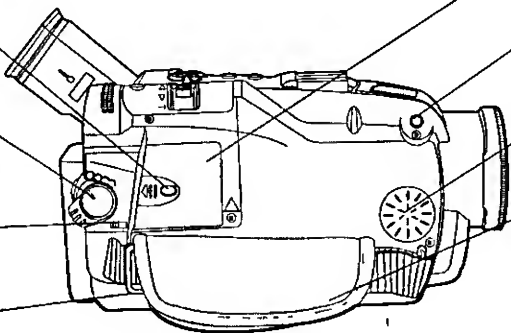
Shoulder Strap Attachment Ring
See page 8

M-CARD Door
See page 10

External Microphone Jack
See page 50

Built-in Speaker
See page 27

Hand Strap
See page 8



Rear View

Cassette Compartment Cover
See page 7

LCD (Liquid Crystal Display) Monitor
See pages 9, 10, 23, 27

LCD-OPEN Button
See pages 9, 10, 23, 27

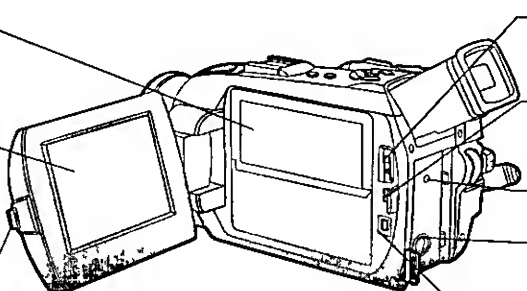
TAPE EJECT Switch
See pages 7, 9

DV Input/Output (i LINK) Connector
See pages 54, 64

DC IN Terminal
See page 12

S-VIDEO Input (PV-DV701 only)/Output Connector
See pages 31, 52, 53

USB Terminal
See page 56



Index of Controls

Rear View

PHOTOSHOT Button

See pages 32, 33, 41

JOG KEY

See pages 13, 14

M FOCUS DIAL

See page 48

Electronic Viewfinder (EVF)

See page 9

POWER ZOOM Lever

See page 22

VOLUME Lever

See page 27

Lens Cap

See page 8

A/V Input (PV-DV701 only)/ Output Connector

See pages 31, 52, 53

PHONE Jack

See page 27

Top View

PAUSE Button

See pages 28, 29, 50, 51, 52, 53

CAMERA STILL Button

See pages 46

M-DEL Button

See pages 35, 36, 37

EIS Button

See page 39

TRANSFER Button

See page 57

FADE Button

See page 49

REC Button

See pages 53, 54

PLAY Button

See pages 10, 27

M-PLAY Button

See pages 34, 35

MULTI Button

See page 47

STOP Button

See pages 10, 27

M-STOP Button

See pages 34, 35, 36, 37

FF Button

See page 28

BACK LIGHT Button

See page 48

REW Button

See pages 10, 27

RECORDING CHECK Button

See pages 24

Back View

Vision Adjustment Control

See pages 9, 22

Menu Button

See pages 13, 14

POWER Lamp

See page 22

REC/PAUSE Button

See pages 9, 22

Underside View

Tripod Receptacle

Index of Controls

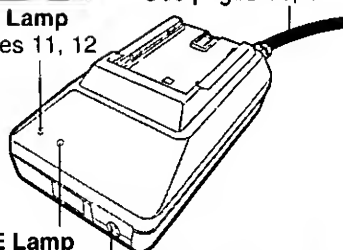
AC Adaptor

POWER Lamp

See pages 11, 12

AC Power Cord

See pages 11, 12



CHARGE Lamp

See page 11

VCR DC Output Connector

See page 12

CAUTION:

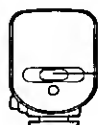
This unit will operate on 110/120/220/240 V AC. An AC plug adaptor may be required for voltages other than 120V AC. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug. We recommend using the accessory power plug adaptor (VJSS0070) in an area which has special AC outlets.

Color Enhancement Light



RELEASE Button

See page 7



LIGHT Button

See page 7

Remote Control (PV-DV701 only)

DATE/TIME Button

See pages 20, 25

DISPLAY ON TV Button

See pages 25, 31

COUNTER/TC Button

See pages 19, 25

VIDEO REC Button

See pages 25, 53, 54

PLAY Button

See pages 25, 27, 53, 54

REWIND/SEARCH Button

See pages 25, 28

REVERSE SLOW/F ADV Button

See pages 25, 28, 29

REVERSE INDEX-SEARCH Button

See pages 25, 30, 41

STOP Button

See pages 25, 27, 54

SET Button

See pages 13, 14, 25

MENU Button

See pages 13, 14, 25, 51

RESET Button

See pages 25, 51

PHOTOSHOT Button

See pages 25, 41

REC/PAUSE Button

See pages 22, 25

POWER ZOOM Switch

See pages 22, 25

SPKR VOL +/-

See pages 25, 27

A DUB Button

See pages 25, 50

FAST FORWARD/SEARCH Button

See pages 25, 28

FORWARD SLOW/F ADV Button

See pages 25, 28, 29

FORWARD INDEX-SEARCH Button

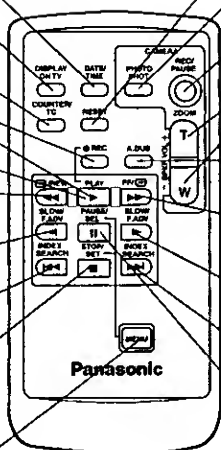
See pages 25, 30, 41

PAUSE Button

See pages 25, 28, 53, 54

SEL Button

See pages 13, 14, 25



Limited Warranty

Panasonic Consumer Electronics Company,
Division of Matsushita Electric Corporation
of America, One Panasonic Way
Secaucus, New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric of Puerto Rico, Inc
AVE 65 de Infanteria, Km 9 5 San Gabriel
Industrial Park, Carolina, Puerto Rico 00985

PANASONIC/QUASAR Video Products Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the Warrantor") will repair or replace this product with new or refurbished parts or equivalent product, free of charge, in the USA or Puerto Rico, in the event of a defect in materials or workmanship as follows (all time periods commence from the date of the original purchase)

PRODUCT	PARTS	LABOR	SERVICE	CONTACT NUMBER
CAMCORDER	ONE (1) YEAR EXCEPT CCD IMAGE SENSOR CCD IMAGE SENSOR -SIX (6) MONTHS	NINETY (90) DAYS NINETY (90) DAYS	Carry-In or Mail-In	1-800-211-PANA(7262)
DVD/VCR DECK	ONE (1) YEAR	NINETY (90) DAYS	Carry-In or Mail-In	1-800-211-PANA(7262)
DIGITAL STILL CAMERA	ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR CCD IMAGE SENSOR -SIX (6) MONTHS	NINETY (90) DAYS NINETY (90) DAYS	Carry-In or Mail-In	1-800-272-7033
A/V MIXER	ONE (1) YEAR	NINETY (90) DAYS	Carry-In or Mail-In	1-800-211-PANA(7262)
TV/VCR, TV/DVD TV/DVD/VCR COMBINATION	ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS	NINETY (90) DAYS CRT - NINETY (90) DAYS	Carry-In 21" CRT and Smaller In-Home or Carry-In 22" CRT and Larger	1-800-211-PANA(7262)
TV/HDR COMBINATION	ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS	NINETY (90) DAYS CRT - NINETY (90) DAYS	In-Home or Carry-In	1-888-843-9788

Batteries (if included) - New rechargeable batteries in exchange for defective rechargeable batteries for ten (10) days. Non-rechargeable batteries are not warranted.

Tape (if included) - New video cassette tape in exchange for a defective video cassette tape for five (5) days.

Memory cards (if included) - Exchange defective item for new one for ninety (90) days.

In-home, carry-in or mail-in service, as applicable, in the USA can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Servicenter Directory. Or call toll free contact number listed above, to locate an authorized PASC Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship, which occur during normal use and does not cover normal maintenance, including, but not limited to, video and audio head cleaning. The warranty does not cover damage which occurs in shipment, or failures which are caused by products not supplied by the warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above.

THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION, DAMAGE TO RECORDING MEDIA) RESULTING FROM THE USE OF THIS PRODUCTS, OR ARISING OUT OF ANY BREACH OF THE WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Department at the Panasonic Consumer Electronics Company address above.

SERVICE CALLS WHICH DO NOT INVOLVE DEFECTIVE MATERIALS OR WORKMANSHIP AS DETERMINED BY THE WARRANTOR, IN ITS SOLE DISCRETION, ARE NOT COVERED. COSTS OF SUCH SERVICE CALLS ARE THE RESPONSIBILITY OF THE PURCHASER.

warvid 02/ 12/ 2001

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:
1-800-211-PANA(7262), Monday-Friday 9am-9pm Saturday-Sunday 9am-7pm, EST.
or send e-mail : consumerproducts@panasonic.com

Web Site: <http://www.panasonic.com>

You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)

Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(6 am to 5 pm Monday - Friday, 6 am to 10 30 am Saturday, PST)
(Visa, Master Card, Discover Card, American Express, Check)

Product Repairs

Centralized Factory Servicenter

MAIL TO

Panasonic Services Company

1705 N Randall Road,

Elgin, IL 60123-7847

Attention: Digital Camera Repair

Please carefully pack and ship, prepaid and insured, to the Elgin centralized repair Factory Servicenter. While there will be added handling delays, you may bring your unit to one of the following locations who will then forward the unit to Elgin for repair.
Customer's in Puerto Rico, please ship or carry in to location below ("Service in Puerto Rico")

Factory Servicenter Locations

CALIFORNIA

6550 Katella Avenue
Cypress, CA 90630
800 Dubuque Avenue
S. San Francisco
CA 94080

3878 Ruffin Road
Suite A
San Diego, CA 92123

FLORIDA

3700 North 29th Avenue
Suite 102
Hollywood FL 33020

GEORGIA

8655 Roswell Road
Suite 100
Atlanta, GA 30350

ILLINOIS

9060 Golf Road
Niles IL 60714
1703 North Randall Road
Elgin, IL 60123
(Pick-up / Drop-off only)

MASSACHUSETTS

60 Glacier Drive,
Suite G
Westwood, MA 02090

MINNESOTA

7850-12th Avenue South
Airport Business Center
Bloomington, MN 55425

OHIO

2236 Waycross Road
Civic Center Plaza
Forest Park, OH 45240

PENNSYLVANIA

2221 Cabot Blvd West
Suite B
Langhorne, PA 19047

TEXAS

13615 Welch Road
Suite 101
Farmers Branch,
TX 75244

WASHINGTON

20425-84th Avenue
South
Kent WA 98032

HAWAII

99-859 Iwaiwa Street
Aiea, Hawaii 96701
Phone (808) 488-1996
Fax (808) 486-4369

Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter:
Ave. 65 de Infanteria. Km. 9.5 San Gabriel Industrial Park Carolina, Puerto Rico 00985
Phone (787) 750-4300 Fax (787) 766-2910

Spanish Quick Use Guide/Guía Para Uso Rápido

Inserte de la batería

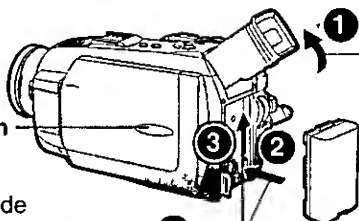
Antes de comenzar

- Cargue la batería (Página 11)

Film de protección

Nota

- Retire la película protectora antes de utilizarlo



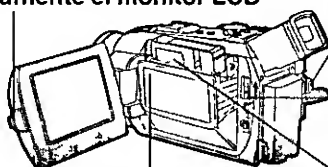
1 Incline el visor hacia arriba

2 Coloque la batería y deslicela hacia arriba hasta que se quede bloqueada con un clic

Inserte el Cassette

Esta videocámara contiene un sistema de ejecución fácil del cassette. Por eso, es fácil de introducir o sacar el cassette aunque esté montado sobre un tripode (Página 7)

1 Presione LCD-OPEN y abra completamente el monitor LCD



2 Ajuste el interruptor de alimentación (POWER) a la posición VCR o CAMERA

3 Deslice el interruptor de expulsión de cinta (TAPE EJECT) para abrir la tapa del compartimento del cassette

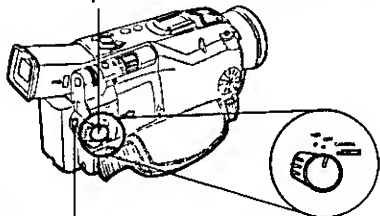
5 Presione la marca PUSH TO CLOSE (EMPUJAR PARA CERRAR) para cerrar la tapa del compartimento del cassette

4 Introduzca un cassette con la parte de la ventana hacia arriba
• Asegurese de que la lengüeta de grabación este cerrada (Página 6)

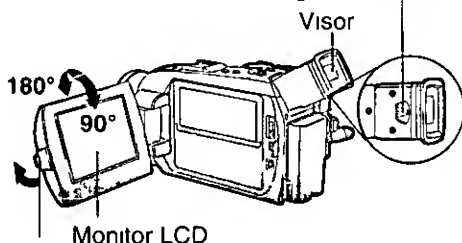
Grabación con la cámara

Cuando el monitor LCD se encuentra totalmente abierto, el visor se DESACTIVA automáticamente

1 Ajuste el interruptor de alimentación (POWER) a la posición CAMERA



2 Ajuste el control de ajuste de visión según lo desee



4 Presione el botón de grabación/pausa (REC/PAUSE) para iniciar la grabación
Vuelva a pulsar el botón de grabación/pausa (REC/PAUSE) para hacer una pausa en la grabación

3 Presione el botón de apertura del LCD (LCD-OPEN) para desbloquear el monitor LCD. Balancee abriéndolo completamente y ajuste el ángulo

Spanish Quick Use Guide/Guía Para Uso Rápido

Introducir la Tarjeta de memoria

Antes de comenzar

- Cargue la batería (Página 11)

- *Tarjeta de Memoria Tarjeta MultiMedia o Tarjeta de Memoria SD (Página 67)
- Asegurese de introducir la Tarjeta de memoria antes de utilizar la tarjeta PhotoShot (Página 32)

A continuación se indican una lista de Tarjetas de Memoria soportadas por esta unidad

Memory Card	Capacity
Tarjeta de memoria (LSFT0198A) o (LSFT0262) (suministrado)	8 MB
Tarjeta MultiMedia (Marca de fabrica SanDisk)	8 MB, 16 MB
Tarjeta de Memoria SD (opcional) (Página 66)	16 MB, 32 MB, 64 MB

Botón para la protección de copia de la tarjeta de memoria SD



La tarjeta de memoria SD tiene un boton para la proteccion de copia. Deslice el botón hacia la direccion de LOCK para prevenir una copia o cambio de la estructura de la tarjeta

Boton para la proteccion de copia

- 1** Ajuste el interruptor de alimentación (POWER) a la posición OFF
- 2** Presione y deslice el botón CARD EJECT para abrir la tapa del compartimiento de la tarjeta de memoria
- 3** Introduzca la tarjeta de memoria hasta que se coloque en su sitio con un clic
- 4** Cierre la puerta de M-CARD

Para quitar la tarjeta de memoria

Presione aqui para quitar la tarjeta



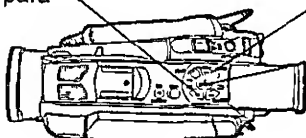
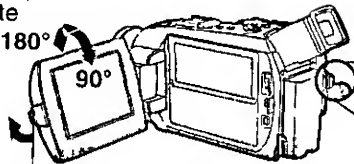
Para ver la reproducción en el LCD (pantalla de visualización de cristal líquido)

Cuando el monitor LCD se encuentra totalmente abierto, el visor se DESACTIVA automáticamente

Antes de comenzar

- Cargue la batería (Página 11)

- 1** Ajuste el interruptor de alimentación (POWER) a la posición VCR
- 2** Presione el botón de apertura del LCD (LCD-OPEN) para desbloquear el monitor LCD. Balancee abriéndolo completamente y ajuste el ángulo
- 3** Presione el botón de rebobinado (REW) para rebobinar la cinta
- 4** Presione el botón de reproducción (PLAY) para reproducir la cinta
- 5** Presione el botón de parada (STOP) para detener la reproducción



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